

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.  $SECTOR~{\mbox{\bf 5}} -- CHART~INFORMATION$ 

# **SECTOR 5**

#### CENTRAL AND SOUTH COASTS OF VIETNAM

**Plan.**—This sector describes the central and S coasts of Vietnam, and includes the port of Sai Gon (Sai Gon). The offlying islands and banks off the SE coast of Vietnam are first described; these include Dao Phu Qui, Iles Chadwick, Royal Bishop Banks and Con Son. The central and S coasts of Vietnam are then described. The arrangement of the latter part is SE, S, then SW from **Mui Lay** (17°05'N., 107°07'E.), the W entrance point of the Gulf of Tonkin to Mui Bai Bung, the SW extremity of Vietnam.

#### **General Remarks**

**5.1** The coast from Mui Lay to Mui Da Nang is generally low with sand dunes, 20 to 30m high, with the exception of the mountains near Mui Chon May Dong.

The coast of central Vietnam to **Mui Vung Tau** (10°19'N., 107°05'E.) is for the most part mountainous, and consists of a succession of jagged cliffs and wind-swept sand hills. There are many bays and secure anchorages S along the coast to **Mui Dinh** (11°22'N., 109°01'E.).

The coast from Mui Vung Tau to Mui Bai Bung is low and at times inundated by the sea, and in most parts the tops of the trees are only just visible at a distance of up to 12 miles. This coast is fringed by banks of sand, with depths of 1.8 to 5.5m, which extend offshore up to 15 miles off the delta of the Mekong.

**Caution.**—Mariners are cautioned that unknown dangers may exist in the approaches to the mouths of the Mekong between the meridians of **Mui Bai Bung** (8°36'N., 104°43'E.) and **Cu Lao Thu** (Dao Phu Qui) (10°33'N., 108°56'E.) and also that less depths than charted may exist.

Vessels navigating within 25 miles of the coastline should exercise extreme caution when N of the Con Son Islands, as numerous dangerous wrecks and obstructions lie in these waters.

#### **Off-lying Islands and Banks**

**5.2 Cu Lao Thu** (Dao Phu Qui) (10°32'N., 108°57'E.), an island with two hills near its N end, lies 40 miles off the coast of Vietnam. The NE hill, 91m high, is conical and several masses of rock near its summit give it a jagged appearance. The SW hill, 108m high, has a round top. The island has been reported to be a good radar target at 18 miles.

Ilot du Sud, 47m high, lies near the center of a reef extending 1.5 miles SSE of the island. Some rocks, one of which is 22m high, lie on the outer edge of the coastal reef which extends 0.5 mile NE of the island.

**Anchorage.**—During the Northeast Monsoon, there is fair anchorage, in depths of 24 to 29m, sand and shells, off the sandy shore forming the W and SW sides of the island. The best position is in depths of 18 to 26m, just S of the SW extremity of the island, about 0.5 mile off the coastal reef.

Anchorage can be taken during the Southwest Monsoon off the NE end of the island, in depths of 26 to 28m, but the bottom is rocky, the holding ground is poor, and it cannot be recommended as an anchorage. There is a better anchorage, however, with the 22m rock bearing 170° distant a little more than 1 mile.

**Caution.**—A mined danger area lies close S of Ilot du Sud. The area is about 6 miles N to S and 5 miles E to W.

Rocher Eleve, 20m high, lies 5 miles NW of Cu Lao Thu. Soundings of 11 to 13m lie within 1 mile E and W of the rock. A depth of 12.8m lies on a bank midway between Cu Lao Thu and Rocher Eleve.

Banc Hollandais consists of coral and has a least depth of 2m about 15 miles WNW of Cu Lao Thu. There are depths of 4.6 to 9m on its SE side, which is very steep-to.

Depths in the channel between Banc Hollandais and Rocher Eleve are very irregular, varying from 12 to 50m. A bank, with a depth of 11m, coral, and a bank with 15.8m, lie 4 miles N and 6 miles NNW, respectively, of the shallowest part of Banc Hollandais.

Vessels should give Banc Hollandais a wide berth as soundings are so irregular in its vicinity that it cannot be approached with safety.

Banc Rivier, 10 miles WNW of Banc Hollandais, together with the banks NE and SW, will be described with the mainland beginning in paragraph 5.37.

Banc de la Marne, 21 miles WSW of Cu Lao Thu, has a least depth of 15.8m. It has not been thoroughly examined. A depth of 13.7m, existence doubtful, and a depth of 16.5m (reported 1964), lie 8 miles ESE of Banc de la Marne.

#### **Iles Catwick**

**5.3 Iles Catwick** (10°00'N., 108°59'E.), S of Cu Lao Thu, lie in a region of irregular depths in which volcanic activity has been noted. Great caution is necessary when navigating in the vicinity. Iles Catwick consists of three islands.

**Poulo Sepate** (Poulo Sapate) (9°58'N., 109°05'E.), 111m high and barren, is the E and highest of Iles Catwick. Viewed from some directions, the island resembles a shoe and from others it appears as a square column, while from E it appears as a pyramid.

The island is steep-to, except for a rock awash, close E of its S extremity. Anchorage can be taken in 29m, E of the island, but the holding ground is not good. Poulo Sepate has been reported to be a good radar target at a distance of 19 miles.

Rocher Julia (Julia Shoal), with a depth of 5.8m, coral, lies 3.5 miles SE of Poulo Sepate. A depth of 28m lies 5 miles SSE of Poulo Sepate, in an area in which submarine volcanoes have been reported. A 20m depth was reported (1978) 33 miles SSE of Poulo Sepate.

Petite Catwick, a pyramidal rock, 17m high and steep-to, lies 2 miles NW of Poulo Sepate. Unsheltered anchorage can be taken in a depth of 20m, about 0.2 mile NE of the rock.

**Grande Catwick** (10°03'N., 108°54'E.), a round, barren rock, 60m high, lies 9.5 miles WNW of Petite Catwick. The island is steep-to, except for a reef extending about 0.2 mile SE. Anchorage can be taken in a depth of 40m, about 0.2 mile N of the island. Grande Catwick has been reported to be a good radar target at 20 miles.

La Paix, a rock which dries 1.8m, lies midway between Grande Catwick and Petite Catwick. The rock is small and steep-to, and the sea always breaks on it except in calm weather.

Rocher Yusun, 17 miles N of Petite Chadwick, is a coral patch with a depth of 6m. In fine weather it is not easily seen, but in the strength of the monsoon the sea has been observed to break on it.

Currents in the vicinity of Iles Catwick are at times very strong. They are quite irregular close in around the islands.

An unlit mooring-type buoy was reported (1989) in a position about 39 miles WSW of Grande Catwick.

## Royal Bishop Banks

- **5.4** Royal Bishop Banks, composed of coral, lies with its least depth of 7.9m located 9°43'N, 108°06'E. The following depths lie at distances and bearings from the least depth:
  - 1. Depths of 12.8m and 16.1m lie 13.5 and 20.5 miles, respectively, ENE.
    - 2. A depth of 13.7m lies 7.5 miles ESE.
    - 3. Depths of 16.8m lie 14 and 22 miles S.
    - 4. A depth of 9.2m lies 7 miles SW.
    - 5. A depth of 10.4m lies 11.5 miles WSW.

Numerous platforms have been established in the Royal Bishop Banks.

**Banc Wallace** (9°29'N., 107°38'E.), with a least depth of 8.5m, lies 31 miles WSW of the least depth of Royal Bishop Banks.

Banc Callou (Callou Bank), with a least depth of 9.2m, lies 11 miles SSW of Banc Wallace.

A shoal, with a depth of 12.8m (reported 1959), lies 19 miles SE of Bank Callou and a dangerous wreck lies 22 miles ENE of the bank.

Banc de l'Astrolabe consists of three detached coral reefs. The E reef (10°06'N., 107°58'E.), with a least depth of 6.7m, lies 25 miles NNW of the least depth of Bishop Banks. The W reef has a least depth of 4.6m and lies 11 miles W of the E reef. The middle reef, with a least depth of 6.7m, lies about midway between the E and W reefs. Banks, with least depths of 8.5m and 8.2m, lie 8 and 10 miles, respectively, N of the middle reef. A depth of 7.3m was reported (1972) to lie 24 miles NE of the middle reef.

A 12.8m patch lies 8 miles ESE of the E reef.

#### Con Son Islands (8°42'N., 106°37'E.)

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**5.5** This group consists of about 12 islands and islets, lying 45 miles from the coast of Vietnam. They are located

near the track of vessels proceeding between Singapore and Sai Gon (Sai Gon). The islands are of sufficient height as to be conspicuous in clear weather from a considerable distance. They serve as a useful mark in making a landfall on the mainland coast from S. Con Son has been reported to be a poor radar target at a distance of 29 miles, and a good radar target at 20 miles.

Con Son, the principal and largest island of the group, is mountainous. The summit of the island, 549m high and flat, lies in the S part of the island. A rocky peninsula, terminating in Mui Con Chim (Mui Ta Be), divides the E coast into two bays, Vinh Con Son and Vinh Dong Bac. The village of Con Son, at the head of Vinh Con Son, contains a penitentiary.

Most of the islets off Con Son are high and wooded.

**Rocher Blanc** (Hon Trung) (8°46'N., 106°43'E.), 57m high, lies 3 miles ENE of the NE end of Con Son.

Hon Cau, 221m high, lies 4.5 miles E of Mui Con Chim. Hon Bai Canh, 2 miles WSW of Hon Cau, lies in the approach to Vinh Con Son, and consists of two hills joined by a narrow isthmus. A light is shown from the islet.

A 13.7m depth was reported (1968) about 32 miles E of the NE end of Con Son.

Hon Chac Lon and Hon Tai Lon lie 0.3 mile SE, and 1 mile ESE, respectively, of the SE extremity of Con Son. Hon Tho (Hon Nghe) lies near the extremity of a reef extending about 0.2 mile E of Hon Tre Nho.

Hon Ba lies close off the SW side of Con Son, to which it is joined by a drying bank. La Dent, 330m high, the summit of Hon Ba, lies near the E end of the islet.

Hon Tre Lon, 141m high, with an islet close off its E extremity, lies 2.5 miles N of Hon Ba, off the W side of Con Son; Hon Tre Nho lies 2.5 miles farther NE. Hon Nghe lies near the extremity of a reef extending 0.2 mile E of Hon Tre Nho.

#### Vinh Con Son

**5.6** Vinh Con Son (Vung Con Son), the S of the two bays on the SE side of Con Son, is entered between Mui Con Chim and Mui Ca Map (Bai Nhut), the SE extremity of Con Son. The bay is open SE, and is recommended only during the Southwest Monsoon.

The N part of Vinh Con Son, inside the line joining the entrance points is encumbered with an extensive shore flat and many detached shoal patches, some of which dry. Banc du Convict, which dries 0.6m, lies near the outer edge of this area, 1.8 miles SW of Mui Con Chim.

Banc des Tortues fronts the bay and extends from the W side of Hon Bai Canh to the N end of Hon Tai. It has general depths of 5.5 to 11m, with shoal patches of less than 5.5m.

Rocher du Courrier, with a depth of 5.8m, lies 1 mile WSW of the W extremity of Hon Bai Cahn, with a 9.2m patch about 1 mile farther SW; they lie in the deep passage between Banc des Tortues and the shallow patches of Vinh Con Son.

**Entrances.**—There are three entrances into Vinh Con Son. The NE entrance, wide and deep, lies between Mui Con Chim and Hon Bai Canh. Care must be taken to avoid Rocher du Courrier.

The SE entrance is entered by passing 0.1 mile NE of Hon Tho, midway between the islet and the shoal with depths of 4.9



Con Son from SW



Con Son from NE



Con Son from N, distant 8 miles

to 5.2m, which lies near the SW end of Banc des Tortues. There are least depths of 9.2m in the fairway of this channel.

The SW entrance lies between Mui Ca Map and Hon Chat. The channel is narrow and deep, but the depths decrease somewhat rapidly N of the entrance.

**Aspect.**—Lights, in range bearing 339°, situated at the head of the bay near the town of Con Son, lead to Pierre Blanche Anchorage. The light structures are conspicuous by day.

A radio tower exhibiting aircraft warning lights stands at the head of the bay.

A light shown from a large white rock is situated 1.2 miles S of the range lights.

**Anchorage.**—Deep-draft vessels, which must enter by the NE entrance, can find a good berth in 11 to 12.8m, with the summit of Hon Tai bearing 182°, and Hon Bong Lan bearing 095°. The latter is a small islet lying 0.3 mile S of the SW end of Hon Bai Canh.

Vessels of moderate or light draft should anchor W of the above position, in depths of 8.5 to 9.4m, to avoid the sea during the strength of the Southwest Monsoon. The squalls are strong there, but the holding ground is good, consisting of gray mud.

Anchorage can be taken in Pierre Blanche Anchorage in depths of 6.4 to 7.3m, with the pier at Con Son bearing 010°, distant 0.8 mile. The entrance range leads clear of Rocher du Milicien, which dries.

Vinh Dong Bac (Ving Dong Bac), immediately NE of Vinh Con Son, offers convenient anchorage during the Southwest Monsoon. The bay is free from dangers, but the depths decrease rapidly within the 10m curve. Vessels should therefore anchor in a minimum depth of 13m, mud. A dredged and buoyed channel leads to the river entrance.

**5.7 Ben Dam** (Baie du Sud Ouest) (8°40'N., 106°32'E.) is formed between the SW side of Con Son and Hon Ba, close SW. The bay is well-sheltered by the surrounding hills, except from NW, but the wind is seldom strong from that quarter. Anchorage can be taken in 11 to 13m, good holding ground of gravel and mud. The head of the bay narrows and dries.

**Off-lying islets.—Hon Trung Lon** (8°36'N., 106°09'E.), the NE of two islets, is 47m high and round, with the upper half covered with vegetation. It lies 24 miles W of the Con Son Islands.

Hon Trung Nho, lying 3.5 miles SW of Hon Trung Lon, is 12.8m high, with patches of vegetation. It appears white from E, and the sea breaks heavily on its E side during high winds.

The above islets have been reported to be good radar targets at 17 miles.

A sounding of 8.2m was reported (1965) to lie 13.7 miles SSE of Hon Trung Lon.

## Vietnamese Coast—Mui Lay to Vung Da Nang

**5.8 Mui Lay** (17°05'N., 107°07'E.), with Hon Co and the mountains inland, has been described in paragraph 4.10.

The coast between Mui Lay and Mui Chon May Tay, 65 miles SE, is low and sandy, with intermittent sandhills. It offers no anchorage during the Northeast Monsoon, but anchorage is possible anywhere off the coast during the Southwest Monsoon, in suitable depths. There are no known sunken

dangers. The high mountains inland are often hidden by mist, particularly during the Northeast Monsoon.

Cua Tung, 4.5 miles S of Mui Lay, is the outlet of Song Ben Hai, and is often marked by breakers. The river is only accessible to boats with drafts up to 1.8m.

Cua Viet, 12 miles SSE of Mui Lay, is often marked by breakers and has a bar, with a depth of 1.5m, lying 0.8 mile E of the entrance and subject to change.

The coast between Cua Viet and Cua Thuan An, 32 miles SE is a sandy plain with fishing villages near the shore.

A depth of 14m lies 21 miles ESE of the entrance to Cua Thuan An.

**Cua Thuan An** (16°34'N., 107°38'E.) is the entrance to Song Huong, which provides access to the city of **Hue** (16°29'N., 107°35'E.). During the Northeast Monsoon, the sea breaks on the bar and it may become impassable. A barrier, with a number of openings through it, stretches across the inner end of Cua Thuan An. During the Southwest Monsoon, the river can probably be entered by vessels with a draft of 3m, but can only be navigated by vessels of 1m draft to Hue, which lies 7 miles upstream. The last of the flood is the best time to enter.

The river is encumbered with sand banks and fishing stakes, and vessels should not enter without local knowledge. The river is at its lowest level in February, and at its highest in November. The tidal currents are strong on the bar and in the river. A light is shown from the W side of the entrance.

There is no regular pilotage service, but the services of a pilot may possibly be obtained.

Anchorage can be taken in 11 to 18m off the bar during periods of favorable winds.

Banc de Thuan An, with depths of 12.8 to 16.5m, lies E of Cua Thuan An, almost parallel to the coast, and 4 to 7 miles offshore.

Cua Tu Hien, located 22 miles SE of Cua Thuan An, leads into Dam Cua Hai, which is connected by inland waterways with Song Huong. The coast between the above entrances consists of sandy beach backed by sandhills, on the summits of which are villages surrounded by trees and cultivated fields. This part of the coast is distinctive and unlikely to be mistaken for that section N of Cua Than An, where the villages are on the sides of the hills, not on the summits.

Mui Chon May Tay, 2 miles ESE of Cua Tu Hien, projects only a short distance from the coast. Nui Vinh Phong, 482m high, and Dong Nhut, 592m high, lie 1 mile and 2.5 miles SSW, respectively, of Mui Chon May Tay.

Baie Chon May (Vung Chon May), entered between Mui Chon May Tay and Mui Chon May Dong, provides anchorage in 13m, good holding ground, leeward of Mui Chon May Dong. However, the bay is barely tenable when the Northeast Monsoon is fairly established.

**Mui Chon May Dong** (16°21'N., 108°02'E.) is the N extremity of a steep and wooded peninsula, joined to the coast by a sandy isthmus. The peninsula rises to Nui Tron, 282m high, 1.7 miles from the cape.

The coast is low from the peninsula of Mui Chon May Dong to the outlet of Dam Lap An, 6 miles SE, which is marked by a pagoda. The coast is rocky for a distance of 6 miles to the peninsula at the NW entrance point of Vung Da Nang.

**Hon Son Cha** (16°13'N., 108°12'E.), a 230m high island, is cliffy and separated from the NW entrance point of Vung Da

Nang by a passage about 0.3 mile wide, with a depth of 24m in the fairway.

## Vung Da Nang (16°09'N., 108°12'E.)

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**5.9 Vung Da Nang** (Da Nang) (16°09'N., 108°12'E.) is entered between the N extremity of Ban Dao Tien Sa and another high peninsula, lying 4 miles NW. The entrance to the bay is easily recognized by Hon Son Cha, previously described above, and Ban Dao Tien Sa, which lie off the NW entrance point of the bay. There are a number of dangerous wrecks in Vung Da Nang.

Ban Dao Tien Sa, a mountainous peninsula of irregular outline, rises to an elevation of 696m near its center, and is joined to the mainland by a low isthmus. **Mui Da Nang** (16°07'N., 108°21'E.) forms the E extremity of Ban Dao Tien Sa, and a small peninsula, 62m high, with Hai Quan (Ilot de l'Observatoire) at its S end, forms the W extremity. Rocher Canton, which dries 0.6m, lies 0.4 mile N of the N extremity of Ban Dao Tien Sa, is generally visible and is marked close N by a buoy. An obstruction with a least depth of 9.6m lies 1.3 miles WSW of Rocher Canton.

The port of **Da Nang** (16°04'N., 108°14'E.) lies in the SW part of Vung Da Nang, on the W bank of Song Han, close within the river mouth. The channel to the river is protected on its W side by a detached breakwater nearly 1 mile long. A breakwater extends NW from the E side of the entrance to the river.

Da Nang is a principal port of central Vietnam. The terminal handles bulk cargo, being the port for the coal mines of Nang Son, 35 miles upriver, as well as general cargo, containerized cargo, cars, and petroleum products.

Winds—Weather.—During the Northeast Monsoon season, from November to March when fresh breezes prevail, the climate is temperate. Squalls from the N appear in February, warning of which is given by the clouds amassing on the mountains N. Exposure to the sun should be avoided during the remaining 7 months of the year. The heat is very trying in April and May due to the frequent calms. At this time vessels should anchor well out in the bay away from the high land of the peninsula in order to have the benefit of any light airs, avoiding the stifling inshore anchorages. In June the heat is tempered somewhat by land and sea breezes.

**Tides—Currents.—**The tidal rise at Da Nang is 1.2m at MHHW and 1.1m at MLHW.

During large tides the currents in the bay are negligible, and only just reach a velocity of 0.5 knot in the river. There is no flood current at Da Nang during nominal tides.

**Depths—Limitations.—**There are depths of 18 to 22m in the entrance of Vung Da Nang, decreasing gradually toward the SW shore. The entrance channel is dredged to a controlling depth of 13m.

The two piers NW of Hai Quan (Ilot de l'Observatoire) comprise the sea port of Tien Sa. There are four berths able to accommodate vessels of up to 182m in length with alongside depths of 9.5m.

A jetty, 91m long, projects SE from the S end of Hai Quan. Vessels up to 190m in length, 26m beam, and drawing up to 11m can berth at this jetty.

The channel from Ile de l'Observatoire to the entrance of Song Han has charted depths of 4.5m.

The main quay at the river port of Song Han is 530m long and has alongside depths of 4 to 6m. Song Han 7 is 134m long with an alongside depth of 6m. Song Han 8 is 90m long and has an alongside depth of 6m. Song Han 9 is 70m long and has an alongside depth of 6m. Quay No. 234 is 220m long and has an alongside depth of 6m.

My Khe (16°04'15"N., 108°15'20"E.), an offshore tanker berth in depths of 12m, lies 2 miles off the S shore of Vung Da Nang and can accommodate vessels of 35,000 dwt.

Lien Chien (16°08'15"N., 108°08'10"E.), a tanker mooring berth designated for vessels of up to 5,000 dwt, lies in depths of 7.6m in the N part of Vung Kim Lien, on the W side of Vung Da Nang.

Submarine pipelines connect the oil berths mentioned above to the shore and are best seen on the chart.

**Aspect.**—A light is shown from the E side of Ban Dao Tien Sa, 1.8 miles NW of Mui Da Nang.

A conspicuous radar tower stands on the 621m peak on the W side of Ban Dao Tien Sa.

A light is shown on the W extremity of Ban Dao Tien Sa, about 0.5 mile NW of Hai Quan.

**Pointe Isabelle** (16°10'N., 108°09'E.), the SE end of a small peninsula, 130m high, on the W side of the bay, is reported to be a good radar target.

A green tank is conspicuous 1.8 miles ESE of Hai Quan.

Lighted buoys mark the channel over the bar leading to the anchorage E of Hai Quan, and to the entrance of Song Han.

The detached breakwater on the W side of the channel leading to the river entrance is marked by lights at its N and S ends.

**Pilotage.**—Pilotage is compulsory. Pilots will board in the designated quarantine anchorage (16°10'N., 108°11'E.). Requests for pilotage should be sent 48 and 24 hours in advance. Berthing is usually restricted to daylight hours.

**Signals.**—The Harbor Entrance Control Post (HECP) is situated near the W extremity of Bun Dao Tien Sa, which may be contacted on 2716 kHz. A signal station is situated near the light structure NW of Mui Da Nang.

**Anchorage.**—Large vessels anchor in the 45 designated anchorages established in Vung Da Nang in depths of 10 to 16m.

Small vessels can anchor E of Hai Quan, sheltered from the force of the Northeast Monsoon.

Vung Da Nang offers no sheltered anchorage during the Northeast Monsoon or during a typhoon; in the latter case the best anchorage is in the shelter of **Cu Lao Cham** (15°57′N., 108°31′E.).

Emergency and Explosive Anchorages are situated in the W part of the bay.

**Directions.**—Vung Da Nang is easy of access between the N side of Ban Dao Tien Sa and Hon Son Cha, 4 miles NW. Vessels should pass N and W of Rocher Canton.

To enter Song Han, after passing Hai Quan, a vessel should keep the range lights, situated NE of Hai Quan, in line astern, and proceed through the dredged channel. Caution is necessary to avoid the numerous fishing vessels which generally show no lights.

## **Vung Da Nang to Vung Qui Nhon**

**5.10** Baie du Lutin (Bai Num) (16°06'N., 108°18'E.), on the S side of Ban Dao Tien Sa, provides sheltered anchorage in 11 to 12m, mud, to vessels with local knowledge.

Baie du Rocher Noir lies farther W. Rocher Noir, above water, lies on a shoal outside the entrance of the bay.

Southwest of Rocher Noir there is a stretch of coast known locally as China Beach. An offshore pipeline berth, 1 mile S of Rocher Noir, can accommodate tankers up to 183m long, with drafts of 13m.

The coast between Ban Dao Tien Sa and Song Cua Dai, 15 miles SW, is low and backed by lagoons. A hill, 106m high, rising 10 miles NW of Song Cua Dai, is the only landmark on this stretch.

**Song Cua Dai** (15°53'N., 108°24'E.) is entered between Pointe Cua Dai (Mui Cua Dai) and Mui An Luong, 1 mile E. A narrow sandbank extends in a curve 1 mile E of Pointe Cua Dai. Southward of the bank, Song Cua Dai is fronted by a bar, about 1 mile wide. The channel through the bar has a depth of about 1.5m, but is subject to frequent change.

Anchorage can be taken in depths of 14 to 18m outside the bar, but the holding ground is poor. The masts of junks, anchored inside the bar, are visible from seaward.

# **Off-lying Islands**

**5.11** Cu Lao Cham (15°57'N., 108°31'E.) is the largest of a group of islands extending up to 10 miles ENE of the mouth of Song Cua Dai. It is 517m high, and can be seen for a great distance in clear weather.

**Anchorage.**—The bay on the SW side of Cu Lao Cham provides good shelter during the Northeast Monsoon, in depths of 7.3 to 8.2m, sand and mud, good holding ground. Good shelter can also be found in deeper water SW of the island.

Hon Tai, 212m high, lies 0.7 mile S of Cu Lao Cham. Rocher d'Entrecasteaux, with a least depth of 4.3m, lies 0.8 mile WSW of Hon Tai.

Hon Giai and Hon Mo lie 1 mile and 2 miles, respectively, SSW of the W end of Cu Lao Cham.

Hon La, 166m high, lies 2 miles W of Cu Lao Cham. Hon Co and Hon Cu lie 1 mile and 1.5 miles, respectively, farther W.

**Caution.**—Cu Lao Cham, Hon Tai, and Hon Giai lie in an area restricted to traffic.

The depths between the Cu Lao Cham group are irregular, with shoal patches. Several areas of potential danger, many of which are charted, lie up to 60 miles offshore from and between ESE and NNE of Cu Lao Cham.

A 9.7m patch was reported (1960) about 50 miles ENE of Cu Lao Cham. A depth of less than 9.2m and a depth of 12.8m were reported (1964) about 6 and 7.5 miles, respectively, SW of the above patch. Vessels should give the area a wide berth.

The coast between Song Cua Dai and **Mui An Hoa** (15°31'N., 108°41'E.), 44m high, located 28 miles SE, continues at a low elevation. Hon Ong, a steep-to islet, 140m

high, lies 18 miles N of Mui An Hoa. In the interior are several mountain ranges. Hon Nui Tau, 953m high, lies 31 miles NW of Mui An Hoa.

A ledge of rocks, with a depth of 1.8m and another ledge with depths of less than 0.3m, lie 1 mile NW and 0.5 mile W, respectively, of Mui An Hoa. The sea sometimes breaks on these ledges.

**5.12** Vung An Hoa lies between Mui An Hoa and a peninsula lying 1.2 miles SSE. The bay is encumbered by rocks and islets in its N part. Truong (Trung) Giang discharges into the S end of the bay.

A radio tower, marked by red obstruction lights, and a water tank stand near the S entrance point of the bay. A conspicuous dome and water tank stand about 1 mile S of the S entrance point.

A channel, dredged to 6.1m in 1970 and marked by lighted buoys, leads through the S part of Vung An Hoa, and to a ramp near the E entrance of Truong Giang.

An offshore pipeline berth, 3.5 miles SE of Vung An Hoa, can accommodate vessels up to 183m in length and up to 10.3m in draft.

Vung Dung Quat is entered between Mui An Hoa and **Mui Dat Vian Ka** (Mui Vian Ka) (15°25'N., 108°48'E.). Foul ground extends about 0.3 mile NNW of the latter point. Song Tra Bong enters the bay 2.5 miles SW of Mui Dat Vian Ka. Several islets and rocks lie off the mouth of the river. Inland of the coastline the country is mountainous. Nui Chua, 1,362m high, lies 14 miles SW of Mui An Hoa.

**Anchorage.**—During the Southwest Monsoon, good anchorage can be taken in the SE part of Vung Dung Quat. Large vessels should anchor, in depths of 15m, SW of Mui Dat Vian Ka. Small vessels can anchor, in depths of 5.5 to 7.3m, nearer the shore.

**5.13 Mui Nam Tram** (15°21'N., 108°52'E.), rising to an elevation of 141m, lies 1.5 miles E of Mui Dat Vian Ka, from which it is separated by a bay. Between Mui Nam Tram and Pointe de Go Nhan, 6 miles SSE, lie two open bays separated by Mui Phuoc Thien (Pointe de Phuoc Thien), a 31m high headland. A rock, awash, lies 0.5 mile SE of Pointe de Go Nhan.

A sandy bay lies between Pointe de Go Nhan and Mui Ba Lang An, 6 miles SE. Anchorage can be taken in depths of 10 to 12m in the S part of the bay, NW of Mui Ba Lang An.

**Mui Ba Lang An** (Mui Batangan) (15°14'N., 108°57'E.), 36m high, is fringed on its N side by a reef and rocks, some of which are above water, extending more than 0.5 mile offshore. Hon Bong Lan (Rocher Plat), 6m high, lies 3.5 miles SSE of the cape, and 1.8 miles offshore. Two detached rocks, with depths of 7.6 and 2.7m, lie 1 mile and 1.3 miles, respectively, NNW of Hon Bong Lan. Mui Ba Lang An should be given a wide berth.

#### **Off-lying Islands and Dangers**

**5.14 Cu Lao Re** (15°23'N., 109°07'E.), an island lying 12 miles NE of Mui Ba Lang An, is formed of several craters and peaks. These appear isolated when viewed from a distance of 25 miles, except on a N bearing, when the island has a level

aspect. The E and highest peak is 169m high. A light is shown from the NE extremity of the island.

Cu Lao Re is fringed by coral reef which extends 0.7 mile WNW from its W extremity and 1 mile SE from its E end.



#### Cu Lao Re from SE

**Anchorage.**—The holding ground off the island is rocky and poor, but temporary anchorage can be taken S of the summit. The best anchorage during the Southwest Monsoon is N of the W peak, where the sea is generally calmed.

Cu Lao Bo Bai, a rocky islet, lies 2.5 miles NNW of Cu Lao Re. It is fringed by coral reef, and lies on a bank, with depths of less than 9m, extending 0.5 mile offshore.

Banc du Volta, with a least depth of 4.3m, lies 6 miles NW of Cu Lao Re. The sea breaks frequently on the bank; during the Southwest Monsoon, it is frequented by fishermen.

In 1965, a depth of 11m was reported to lie 31 miles NE of Cu Lao Re, with another shoal, with a depth of 18.3m, lying 5 miles farther N. In the same year a shoal with a depth of 18.3m was reported to lie 23 miles ESE of the same island.

**5.15** The coast between Mui Ba Lang An and Cap Sa Hoi, 35 miles SSE, is backed by sandhills. A prominent sand hill, 163m high, lies close inland from Cap Mia, which lies 10.5 miles NNW of Cap Sa Hoi. Inland of the coastline the country is mountainous. Nui Da Vach, the highest in the area, rises to an elevation of 1,136m, about 21 miles SW of Mui Ba Lang An.

Song Tra Khuc discharges 6 miles SSW of Mui Ba Lang An. The village of Quang Ngai is situated 5 miles within the river mouth

Rocher Noir, a 4.5m high black rock, lies 3 miles S of Song Tra Khuk, near the edge of a bank that extends 0.8 mile offshore.

**Cap Sa Hoi** (14°40'N., 109°05'E.), 92m high, is the S end of a peninsula enclosing a lagoon. There is a customhouse on the cape and a village lies on the mainland W.

The coast between Cap Sa Hoi and Pointe de Kim Bong, 5 miles S, consists of beaches, separated by rocky points. The coast is then sandy to Pointe An Yo, 8.5 miles farther S. Nui Kho, with a red summit, 223m high, lies 4 miles NW of Pointe An Yo and 2 miles inland.

Pointe An Yo is the N of two rocky spurs that extend from a chain of mountains. The summit of the mountains rises 5 miles SSW of the point. A rock, with a depth of 2.1m, lies 0.5 mile E of Pointe An Yo.

**Ile Tortue** (14°22'N., 109°12'E.), a 10m high black islet, lies 6.5 miles SE of Pointe An Yo and 3.5 miles offshore. A reef extends a short distance from its E side.

Ile Nuoc, 45m high with two peaks, lies 6.5 miles S of Ile Tortue. It is the largest and NE of a group of black, rocky islets, and lies on a bank extending 1 mile from the mainland. Rocher

Plat, which dries 2.1m, lies on this bank about 1 mile S of Ile Nuoc. A white house, formerly a lighthouse, lies on the mainland W of the islet.

**5.16** Nuoc Ngot (14°08'N., 109°13'E.) is a steep promontory, 168m high, with several red granite peaks made conspicuous by the patches of sand on their slopes. This promontory is the S end of a peninsula that forms the E side of Dam Nuoc Ngot.

Nui Ba, 874m high, with an isolated rock on it, lies 7 miles SW of Nuoc Ngot. Hon Heo, 664m high with a flat summit and an isolated rock on it, lies 5 miles ESE of Nui Ba.

Hon Trau, a barren, granite islet, 37m high, lies 4 miles E of Nuoc Ngot. Two rocks, above water, lie 0.2 mile E of the islet. A rock, on which the sea breaks, lies between the rocks and the islet.

**Thanh Hi** (14°01'N., 109°15'E.), 188m high, lies 2.5 miles E of Hon Heo. Tan Ly, a 218m high prominent hill, lies on the coast 1.5 miles farther S, separating two small bays. A rocky point lies 2 miles S of Tan Ly. An open sandy bay, backed by sandhills, extends 5 miles SSE to Ban Dao Phuoc Mai, a 94m high promontory, near its N end.

**Nghiem Kinh Chieu** (13°53'N., 109°19'E.), a rock-fringed islet with another islet close N, lies 0.3 mile E of the above promontory. The E side of Ban Dao Phuoc Mai is steep and high to Mui Yen at its SE extremity. A prominent gap between two hills lies 3.5 miles N of Mui Yen. **Nui Den** (13°51'N., 109°17'E.), 361m high, the summit of the peninsula, lies 2.3 miles N of the gap.

Cu Lao Hon Kho, a 52m high islet connected to the coast by a reef, lies 0.8 mile NE of Mui Yen.

# Off-lying Islands—Approach to Vung Qui Nhon

**5.17** Cu Lao Coni (Nui Ong Can), a small group of islets, the highest of which is 34m high, lies 3.5 miles E of the N extremity of Ban Dao Phuoc Mai. A 7.3m rocky patch lies 0.4 mile W of Cu Lao Coni.

Nui Ong Co, a steep pyramidal rock, 54m high, lies 1.7 miles W of Cu Lao Coni..

**Cu** Lao Xanh (Cu Lao Poulo Gambir) (13°37'N., 109°21'E.), with two summits, the tops of which are bare, lies nearly 8 miles SSE of Mui Yen. The NW hill is 123m high, and a light is shown from the E hill. Banc de Paques, composed of coral and with a least depth of 7.6m, lies 2 miles W of the S extremity of Cu Lao Xanh.

Les Mamelles are two sharp-peaked rocks, one of which is 38m high, lying 0.7 mile SSE of Cu Lao Xanh. Another rock lies close S of Les Mamelles, and there is a depth of 5.2m about 0.1 mile S of this rock.

#### Vung Qui Nhon (13°46'N., 109°14'E.)

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**5.18** Vung Qui (Quy) Nhon, on the W side of Ban Dao Phouc Mai, is a mostly shallow bay, with the exception of the dredged channels in its S part. The bay is entered between Pointe Sud, the SW extremity of Ban Dao Phouc Mai, and Pointe de Gia, about 0.3 mile N. The town of Qui Nhon

occupies the spit forming the SW shore of Vung Qui Nhon which terminates in Pointe de Gia. Numerous streams discharge into the W side of the bay. Les Sept Ilots lie nearly in the middle of the bay, 1.8 miles NNW of Pointe de Gia.

The port handles cement, fertilizer, timber and wood products, and agricultural cargo.

**Tides—Currents.—**The tidal rise at Qui Nhon is 1.9m at MHHW.

Tidal currents near Culao Hon Kho set W on a rising tide, attaining a velocity of 1.5 knots. During the rainy season the current setting out of Vung Qui Nhon is strong. The current at the entrance attains a velocity of 2 knots with large tides, and 1.5 knots with small tides; this velocity is attained 6 hours after high and low water locally. The current changes direction 2 hours after high and low water.

**Depths—Limitations.**—The 20m curve in the approach to Qui Nhon runs roughly between Mui Yen and close E of **Hon Dat** (13°41'N., 109°16'E.).

Hon Kho, with a depth of 7m, is an isolated danger in the approach, lying 2.5 miles SSE of Mui Yen.

A buoyed channel, established between the 10m curves, leads between Pointe Sud and Pointe de Gia.

There are two berths with a total length of 350m and a depth of 7.5m alongside. There is also a floating petroleum dock for tankers having a draft of up to 8m.

Vessels of up to 16,000 dwt, having a maximum length of 180m, with drafts of up to 7.5m can be accommodated.

A rock, with a depth of 3.9m and marked by a buoy, lies 0.1 mile W of Pointe Sud.

**Aspect.**—Ban Dao Phuoc Mai and Cu Lao Xanh have been previously described in paragraph 5.16 and paragraph 5.17, respectively.

Nui Mui Yen, 151m high, lies 0.6 mile NNW of Mui Yen, the SE extremity of Ban Dao Phuoc Mai. Nui Dau Goc Let (Phuong Mai), 318m high, the highest peak on this part of the peninsula, lies 1.5 miles farther NW. Hon Dat, 68m high and covered with brushwood, lies 4.5 miles SSW of Nui Mui Yen, and 1 mile off the mainland.

A tower, showing red obstruction lights and white lights at its base, stands 3.5 miles WSW of Pointe Sud.

Beacons, in range bearing  $352^{\circ}$ , lead from the Zero Buoy to the bay.

**Pilotage.**—Pilotage, which is compulsory, should be arranged for well in advance. The pilot boards during daylight hours at Zero Buoy (13°44'19"N., 109°15'16"E.). During inclement weather the harbormaster designates an anchorage position via VHF where the pilot may board with safety.

**Signals.**—The Harbor Entrance Control Post (HECP) on Pointe Sud can be contacted on 2716 kHz or by flashing light.

**Anchorage.**—Anchorages in the Qui Nhon area are assigned by the Harbor Entrance Control Post. Large vessels anchor S of Ban Dao Phuoc Mai in suitable depths. Sheltered anchorage can be found in Vung Qui Nhon, in depths of 5.5 to 9m, N of Pointe de Gia.

#### **Vung Qui Nhon to Vung Xuan Dai**

**5.19** Mui Ke Ga (13°34'N., 109°18'E.), 4 miles SW of Cu Lao Xanh, is the E extremity of a rocky peninsula. A few above-water rocks lie close off the NW side of the peninsula.

Nui Yen Beo, 336m high with a conical summit, lies 3.5 miles W of Mui Ke Ga.

Baie De Cu Mong, entered 2.5 miles SSW of Mui Ke Ga, is quite shallow. There are depths of 11m in the entrance which shoal rapidly. The shores of the bay are densely populated and bordered by coconut trees. Anchorage, well-sheltered, can be taken by small vessels in the SW part of the bay in a depth of 5m, mud.

Mui Vung Trich, 3.8 miles S of Mui Ke Ga, is the S extremity of a peninsula, 114m high, joined to the mainland by a narrow isthmus of sand. Anchorage during the Southwest Monsoon can be taken, in depths of 5 to 9m, in the bay SW of Mui Vung Trich.

Mui Ong Dien, 6 miles SSE of Mui Ke Ga, rises to an elevation of 158m and is the NE end of a hilly peninsula forming the E side of Vung Chao.

**Mui Luoi Cay** (13°24'N., 109°18'E.), a perpendicular cliff, 4 miles SSW of Mui Ong Dien, is the S extremity of the peninsula. Three peaks rise on the S side of the peninsula; the E and highest peak is 358m high, and nearly 2 miles N of Mui Luoi Cay.

#### **Vung Xuan Dai and Vung Chao**

**5.20 Vung Xuan Dai** (13°23'N., 109°17'E.), entered between Mui Luoi Cay and Mui Ganh Den, 2.5 miles S, provides access to Vung Chao (Baie de Vung Chao), one of the most sheltered bays on the coast of Vietnam. The entrance of Vung Xuan Dai can be recognized by the peaks on the peninsula N of Mui Luoi Cay, the high cliffs of Mui Ong Den and those close N of Mui Vung Trich. Vung Chao is entered between **Mui Mu U** (13°26'N., 109°15'E.) and Dong Tranh, lying 1.2 mile E.

Rocher de l'Illissus, with a depth of 1.8m, lies in the approach to Vung Xuan Dai, 1.2 miles SE of Mui Ganh Den, which is 77m high and cultivated.

**Tides—Currents.—**The tidal rise at Vung Xuan Dai is 1.7m at MHHW.

The tidal currents in the entrance to Vung Xuan Dai attain a velocity of 1.5 knots, setting W on the flood.

**Depths—Limitations.**—Vung Xuan Dai has general depths of 11 to 17m. Vung Chao has general depths of 5.5m to 8.2m. Depths of less than 5.5m extend 1 mile from the W shore of the bay and the NE part of the bay is fringed by a drying reef extending up to 0.5 mile offshore.

Hon Yen (13°23'N., 109°17'E.), 48m high, and formed of jagged red rocks, lies in the entrance of Vung Xuan Dai. A bank, with above-water rocks, extends about 0.2 mile ENE and WSW of the islet. Rocher de l'Octant, with a depth of 1.5m, lies 0.5 mile WSW of Hon Yen.

Cu Lao Ong Xa, gray in color and rock-fringed, lies 2.3 miles WNW of Hon Yen. Rocher du Volga, with a depth of 4m, lies 0.5 mile NNE of Cu Lao Ong Xa.

Rocher Bouee, 1m high, lies 0.4 mile W of **Mui Ganh Tuong** (13°24'N., 109°16'E.), in the approach to Vung Chao.

Hon Lo Dam Ca, a coral patch which dries 1.2m, lies nearly in the middle of Vung Chao, 1.5 miles NNW of Dong Tranh.

**Anchorage.**—Anchorage during the Southwest Monsoon can be taken, in a depth of 11m, with the mouth of Song Binh Ba in the S part of Vung Xuan Dai, bearing 165°, and with Hon

Yen bearing 070°. Rocher de l'Octant is to be avoided when approaching this anchorage.

Anchorage can also be taken in Rade de Vung Lam (Ao Xom Luoi), about 0.5 mile N of Cu Lao Ong Xa, in 9m, mud. When approaching this anchorage, Rocher du Volga should be avoided.

During the Northeast Monsoon, anchorage can be taken, in a depth of 10m, NNW of Rocher Bouee, but the sea is usually rough during this monsoon and if the draft permits it is better to enter Vung Chao.

In Vung Chao anchorage can be taken, in a depth of 7m, between Hon Lo Dam Ca and Mui Co, a point located 2 miles E. Anchorage can also be taken, in depths of 5.5 to 5.9m, in the W part of Vung Chao, off Song Cau, with the town bearing between 280° and 300°. The bottom in the latter two anchorages is hard mud, good holding ground.

## **Vung Xuan Dai to Cap Varella**

**5.21** Mui Lang (13°20'N., 109°18'E.), a black rocky bluff, lies 1.7 miles S of Mui Ganh Den.

Cu Lao Ma Nha (Lao Ma Nha), a wooded island, 104m high, lies 3.5 miles SE of Mui Lang. It is uninhabited, but frequented by fishermen. During the summer the narrow channel between the island and the coast is blocked by fishing nets.

**Le Trapeze** (13°15'N., 109°19'E.), a black, prominent point, is located 1.5 miles SW of Cu Lao Ma Nha. A steep-to reef, on which lies an above-water rock, extends 0.3 mile E of the point. Le Bonnet, a black islet, lies 1.8 miles farther SSW.

Iles Bai Ma Lieng lie on a rocky bank extending 2 miles SE from a rocky promontory. **Lao Dua** (13°10'N., 109°20'E.), 14m high, lies near the outer end of the bank. Hon Chua (Lao Chua), 37m high, lies about midway between Lao Dua and the point. A 7m patch lies 0.5 mile SE of Lao Dua.

Anchorage during the Southwest Monsoon can be taken SW of Hon Chua. Iles Bai Ma Lieng provide some shelter during the Northeast Monsoon, but anchorage is not recommended during the season.

A sandy beach extends from the vicinity of Iles Bai Ma Lieng to Cap Varella.

The mouth of Song Da Rang (Song Ba), accessible only to junks, lies 5 miles S of Iles Bai Ma Lieng. Nui Chap Chai, 391m high, and Nui Hon Chuong, 572m high, are prominent standing 4.5 and 11 miles, respectively, NW of the mouth.

Hon Co, 18m high, lying 9.5 miles SE of the mouth of Song Da Rang and 1.5 miles offshore, is the SE of a group of rocks, some of which are awash.

Cap Varella, the E extremity of Vietnam, consists of steep cliffs rising to four rocky peaks. Three of the peaks lie on the peninsula forming the E side of Vung Ro. Mui Nay is the NE point of the cape. **Mui Ke Ga** (Mui Dieu) (12°54′N., 109°28′E.) lies NE of the NE rocky peak. Mui Ba, 2.3 miles S of Mui Ke Ga, is the SW extremity of the cape.

Nui Da Bia, 706m high, the summit of Cap Varella, is located 3.5 miles W of Mui Ke Ga and has a rock resembling a pagoda. The summit is visible for 50 miles in clear weather, but is often hidden by clouds. A light and a signal station stand on the peak.

**Anchorage.**—During the Southwest Monsoon, anchorage can be taken off the bight NW of Mui Nay, in a depth of 18m, with Nui Da Bia bearing 233°.

**Vung Ro** (12°51'N., 109°25'E.), a small bay, is entered W of Mui La, the SW extremity of Cap Varella. It is backed by high land and its E side formed by Cap Varella. It is one of the safest anchorages on the coast of central Vietnam. The depths in the entrance are 18.3m, which gradually decrease towards the village at the head of the bay. Hon Nua, a 143m high island, with perpendicular cliffs on its E side, lies in the approach to Vung Ro, 1.7 miles SW of Mui La.

An offshore pipeline berth, with a least depth of 12.8m, lies in the NW part of the harbor. A pier, 180m long and linked to the shore by a causeway, has depths of 7.9 to 11.5m alongside.

Anchorage can be taken as convenient in Vung Ro. During the Southwest Monsoon or in good weather anchorage can be taken W of Hon Nua.

## Presqu'ile de Hon Gom

**5.22** Presqu'ile de Hon Gom, with **Mui Ganh** (12°34'N., 109°26'E.) at its S extremity, is joined to the mainland, 15 miles NNW of Mui Ganh, by a low and narrow isthmus about 5 miles long. The islands in Ben Goi can be seen over the isthmus. Hon Nhon, 436m high, 8 miles NNW of Mui Ganh, is the summit of a mountainous projection extending 4 miles SW from the W side of the peninsula.

The S side of Ban Dao Hon Gom is mountainous. Khai Luong, 291m high, and Le Doigt, 309m high, lie 0.8 mile N, and 3.5 miles NNW, respectively, of Mui Ganh.

Chu Mu (La Mere and L'Enfant), 2,051m high, prominent and surmounted by two rocks that appear like fingers of unequal size, is located 31 miles WNW of Mui Ganh. Nui Hon Chao, 1,625m high, lies 10.5 miles ENE of Chu Mu. The mountain peaks are frequently obscured by clouds, especially during the Northeast Monsoon.

Hon Lon, a large island, lies close off the SW side of Ban Dao Hon Gom. On the E side of the peninsula, Hon Trau Nam, a group of eight rocks, 6m high, lies 1.5 miles E of Mui Ganh. Hon Kho Tran, an islet, lies 2 miles farther NNE and 0.5 mile offshore.

Mui Doi, 5.5 miles NNE of Mui Ganh, is the SE extremity of a hilly peninsula. Hon Doi, with sunken rocks lying close to its W and S side, lies close NE of Mui Doi.

### Baie de Van Fong and Ben Goi

**5.23** The approach to Baie de Van Fong and Ben Goi lies between Mui Ganh, the S extremity of Presqu'ile de Hon Gom, and **Mui Ban Thang** (12°24'N., 109°21'E.), 11 miles SSW. The latter point is the E extremity of a mountainous and wooded peninsula. Hon Heo, 813m high, rising 4 miles W of Mui Ban Thang, is the summit of this peninsula.

Lach Cua Be, entered between Mui Ghan and Mui Co, 1 mile W, is the deep clear channel by which vessels reach Cua Van (Port Dayot). Vung Van Fong, which leads into Ben Goi, is entered between the SE extremity of Hon Lon and **Mui Mong** (12°30'N., 109°19'E.), the E extremity of Hon My Giang, 6 miles WSW. Hon Do, 136m high, lies 2 miles ESE of Mui Mong. Hon Hoa, 26m high, lies 1 mile E of Hon Do on a small

shoal patch, and is the outermost islet in the approach to Vung Van Fong. Vung Cai Ban is formed between the latter islands and Mui Ban Thang.

Lach Cua Be is entered W of Mui Ganh. Rocher du Lion, with a depth of 2.7m, lies 0.3 mile S of Mui Ganh. The passage has depths of 28m, and narrows to a width of 0.25 mile NE of Hon Lon, where it enters Cua Van. Vung Thu, a small bay, lies midway along the NE shore of Lach Cua Be.

Cua Van (Port Dayot) is a small land-locked bay on the W side of Ban Dao Hon Gom. It has two prominent islands within it

Lach Co, with depths of 20m, is the continuation W of Lach Cua Be from Cua Van into Ben Goi.

**Anchorage.**—Cua Van provides anchorage in any of its bights in depths of about 18m. The NW bight, where the bottom is mud, is most frequented. In the Northeast Monsoon, there is better anchorage in Vung Thu in depths of 12m, about 0.2 mile offshore.

**5.24** Vung Van Fong has depths of 12 to 28m, mud bottom. Hon Lon, wooded and mountainous, forms the NE side of the bay which is free of dangers. The island rises to a flat summit, 567m high, near its NW end. A small bay indents the SW side of Hon Lon. Hon Den lies 0.7 mile WSW of the NW entrance point of the bay; a patch, with a depth of 2.4m, lies 0.2 mile W of the islet.

Anchorage during the Northeast Monsoon can be taken leeward of Hon Lon, but it is open SE.

Ben Goi is entered between the NW end of Hon Lon and **Pointe Hon Khoi** (12°35'N., 109°15'E.). The latter point is the NE extremity of Presqu'ile de Hon Khoi, with a high summit rising 1.5 miles SSW of the point.

Hon Mai, 42m high, is the outermost of several islets off the NW end of Hon Lon, and lies 0.8 mile NW of the point. A detached drying patch lies 0.2 mile S of the islet.

Banc du Milieu, which dries, lies 0.5 mile W of Hon Mai. Da Bia (described with Cap Varella in paragraph 5.21), in range 022°45' with Hon Mao, the NE of the chain of islets on the NW side of Ben Goi, leads into the bay between Hon Mai and Banc du Milieu.

Plateau du La Perouse, a group of detached shoals with several rocky heads and some with depths of less than 0.6m, lie nearly in the middle of the S end of Ben Goi. Rocky patches having depths of 3m and 0.3m, lie 1.6 and 2 miles, respectively, WNW of Hon Mai, on the NE side of the group.

A chain of islets fringed by drying coral reef lies parallel to the NW side of Ben Goi. Hon Vung, 20m high, the SW of the chain of islets, lies 3 miles NW of Hon Mai. A patch, which dries 1.5m, and another patch, which dries 0.6m, lie about 0.3 mile WSW and NE, respectively, of Hon Vung.

Cua (Kua) Gia, a channel separating the islets from the coast, has a least width of 0.7 mile between the reefs on either side, with depths of not less than 5.5m in the fairway.

**Hon Mao** (12°44'N., 109°20'E.), 16m high, is the NE islet of the group. Hon Trau, a reef which dries 0.6m, lies 1 mile NE of Hon Mai.

**Pilotage.**—Pilotage is compulsory. Vessels approaching the bay should contact Hon Khoi pilots on VHF channel 16 at least 2 hours prior to arrival. The pilot boards just outside the entrance to the bay in position 12°30'N, 109°23'E.

**Regulations.**—Vessels should forward their ETA 48, 24, 12, and 6 hours prior to arrival. The message sent 48 hours prior should include the following information:

- 1. Vessel's name, port of registry, and flag.
- 2. Dwt/nrt/grt.
- 3. Number of crew members.
- 4. Anti-pollution Insurance Coverage (TOVALOP or equivalent).
  - 5. Arrival/departure drafts.
  - 6. Parallel body length (arrival and departure).
  - 7. Freeboard (arrival and departure).
  - 8. Manifold compatability with 8 or 10 inch hose.
  - 9. Cargo description.
  - 10. Total cargo on board.
  - 11. Total cargo transfer.
  - 12. Nationality of senior officers.
  - 13. Validity of trading certificates.

**Anchorage.**—Vessels can anchor as convenient, in depths of 12.8 to 16.5m, in Ben Goi, with Da Bia in range 023° with the summit of Hon Mao, or closer to Ban Dao Hon Gom.

Vung Hon Khoi is entered between the N extremity of Ban Dao Hon Khoi and a point lying 4 miles NW. There are depths of 5.8m between the entrance points, but S of this line the depths decrease rapidly. Anchorage can be taken in the bay in depths of 4m, good holding ground, by small vessels with local knowledge, or in depths of 7m farther out.

**Directions.**—Ben Goi can be entered through Lach Cua Be and Lach Co, or through Vung Van Fong. If entering from the latter, a vessel should pass between Hon Mai and Banc du Milieu, keeping on the charted range line.

Vung Cay Ban, NW of Mui Ban Thang, is sheltered by the islets on its N side. Banc de Deo Ngan, with depths of 7m in its outer part, extends 2.8 miles N of Mui Ban Thang.

#### Baie de Nha Trang Approaches

**5.25** Several islands, the largest of which is **Hon Tre** (12°12′N., 109°17′E.), and **Grand Banc** (12°17′N., 109°18′E.), an extensive shoal, lie in the approach to Baie de Nha Trang.

Hon Tre is formed of three mountain ranges, connected by low isthmuses. The summit of the E range is 414m high and lies nearly 1.5 miles WNW of Mui Rach Trang, the E extremity of Hon Tre. The summit of the central range, 482m high, lies 2 miles farther W. The island is densely wooded and there are steep cliffs in places. A light is shown from Mui Rach Trang.

**Eastern Approach.**—The E approach lies between Mui Rach Trang and Mui Ban Thang, 12 miles N.

**Hon Dung** (12°16′N., 109°22′E.), 218m high and prominent, with a framework tower on its summit, is located 4.5 miles NNE of Mui Rach Trang. The islet is steep-to and bordered at its base by a narrow ridge of shingle. Hon Cau, 116m high and bare with high rocks off its S end, lies 0.6 mile NE of Hon Dung and resembles a ruined castle from the offing.

Hon Cha La, 192m high and rocky, lies 2.5 miles SE of Mui Ban Thang, in the NE part of the approach. The island is bare except for some scrub on its summit, where there is a large boulder. Hon Bac, 18m high, is located 4 miles SSW of Mui Ban Thang, the E extremity of a mountainous and wooded peninsula. **Hon Heo** (12°24'N., 109°17'E.), the summit of this

peninsula, is located near the center of its SE end, 4 miles W of Mui Ban Thang.

Baie de Binhcang lies on the NE side of the approach to Baie de Nha Trang. It is entered between Mui Da Chong and Mui Khe Ga, located 4 miles SW. Hon Cu Lao and Hon Thi lie 3.5 miles NNW and 4.5 miles N, respectively, of Mui Khe Ga. The depths in Baie de Binhcang gradually decrease as the islands are approached. A shallow, marshy inlet lies NW of the islands.

**Anchorage.**—Baie de Binhcang affords good anchorage during both monsoons in depths of less than 18m.

**5.26** Grand Banc lies near the middle of the E approach to Baie de Nha Trang; the depths on the bank are very irregular. Rocher du Nord-Ouest, with a depth of 0.3m, is the shallowest coral head, lying 2.5 miles E of Mui Khe Ga. Rocher Bourayne, with a depth of 1.8m, coral, lies 0.8 mile SE of Rocher du Nord-Ouest.

**Mui Khe Ga** (12°18'N., 109°15'E.), the N entrance point of Baie de Nha Trang, rises steeply from the sea to several high peaks. Due Ba, 578m high, consists of three summits, rising 5.5 miles WNW of the point. Hon Mat (Ile Tortue), 49m high and resembling a tortoise, lies nearly 1 mile S of Mui Khe Ga.

**Southern approach.**—The S approach to Baie de Nha Trang lies between **Mui Dong Ba** (12°08'N., 109°14'E.) and Mui Rach Trang, 7.5 miles ENE. Mui Dong Ba is the E extremity of a mountain range, and rises steeply from the sea. Nui Chu Hin, a 643m high peak, lies 1.5 miles W of the point, and Nui Cau Hin, 978m high, lies 3.5 miles farther WNW.

Hon Tam, 2 miles NW of Mui Dong Ba, lies in the middle of the S approach, and is fringed by a narrow, steep-to reef.

**Mui** Chut (12°13'N., 109°13'E.) is the S entrance point of Baie de Nha Trang. Hon Mieu, 100m high, lies about midway between Mui Chut and Hon Tam.

Hon Mung, 184m high, is located on the E side of the S approach, 2 miles SW of Mui Rach Trang. North of Hon Mung there is an indentation in the S side of Hon Tre.

Hon Mot, 92m high, is located 1.2 miles WNW of Hon Mung. Rocher du Lion, with a depth of 4m, lies 0.3 mile W of Hon Mot.

**5.27 Off-lying islets and dangers in the South Approach.**—Iles des Pecheurs is a group of islets with **Hon Ngoai** (12°00'N., 109°20'E.), 112m high, the S and highest, located 11.5 miles S of Mui Rach Trang. A white cairn stands on the summit of Hon Ngoai, and Rocher Vulcan, with a depth of 1.5m, lies about 0.5 mile N of the islet.

Hon Noi, 2 miles N of Hon Ngoai, is the largest of the group, and its summit, 99m high, has a white cairn on it. Smaller islets lie close N and S of Hon Noi.



Iles des Pecheurs bearing 255°, distant 15 miles

Banc de Castlereagh, Banc de Thuy Trieu, and Banc du Tondu extend NW from Iles des Pecheurs.

Banc de Thuy Trieu has a depth of 5.5m lying 4.5 miles WNW of Hon Noi. Vessels without local knowledge should not pass between Iles des Pecheurs and the coast.

# Baie de Nha Trang (Nha Trang) (12°15'N., 109°14'E.)

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**5.28** Baie de Nha Trang lies between Mui Chut and Mui Khe Ga, 6 miles NNE. In the bay, the shore from Mui Chut to the entrance of Song Cai, 3 miles N, is fronted by a sandy beach, backed by sandhills. The NW shore of the bay, between Song Cai and Mui Khe Ga, is fringed by coral reef. Hon Cut Chim, 7m high, is located 1 mile E of the N entrance point of Song Cai. Depths of 0.3m and less extend 0.1 mile S and W of Hon Cut Chim.

**Tides—Currents.—**The tidal rise at Nha Trang is 1.8m at MHHW.

In Baie de Nha Trang the flow is weak and is governed by nontidal current.

**Depths—Limitations.**—An offshore pipeline berth, close N of Mui Chut, can accommodate tankers up to 10.7m in draft and 20,000 dwt.

There is a quay, 172m in length, with a depth of 8.5m alongside.

A pier, 58m long, for barges and small vessels, has depths of 3 to 6.1m alongside and is situated 0.5 mile NW of Mui Chut.

Cargo vessels are lightened at the anchorages.

**Aspect.**—The islands in the approach to Baie de Nha Trang are good radar targets. A red and white checkered water tank stands 1.5 miles NW of Mui Chut.

A statue of Buddha is prominent above a temple on the summit of a hill, 2 miles farther NNW; the statue is flood-lit and marked by a red obstruction light.

Rocher Noir, 1.5m high, lies 0.3 mile offshore, near the NW end of Hon Tre.

**Pilotage.**—Pilotage is compulsory. For vessels from the S, the pilot boards 1 mile SSW of Hon Mot. For vessels from the E, the pilot boards 2 miles NNE of Mui Chut. Pilots board during daylight hours only.

**Signals.**—The Harbor Entrance Control Post (HECP), close S of Mui Chut, will assign anchorage berths and may be contacted by radio or flashing light.

**Anchorage.**—Anchorage during the Southwest Monsoon can be taken almost anywhere in Baie de Nha Trang, S of the town, over a bottom of sand and mud.

Vessels carrying dangerous cargo anchor NW of Hon Mot in a depth of 20m. Other vessels anchor within 0.5 mile of the quay in a depth of 15m.

There is anchorage, frequented by junks, W of Hon Mieu. During the Southwest Monsoon, this anchorage is sheltered from the swell that frequently comes from SE. During the Northeast Monsoon, the anchorage is sheltered from the heavy swell by the NW end of Hon Tre.

During the Southwest Monsoon, vessels with local knowledge can find secure anchorage in Bai Tru or Bai Tre on the N side of Hon Tre.

During the Northeast Monsoon (October to March) anchorage in Baie de Nha Trang may become untenable due to the heavy swell that enters the bay. At such times, shelter can be found SE of Hon Tre or in the bay on its S side.

**Directions.**—Vessels approaching from the E can pass N or S of Hon Dung. The entrance channel S of Hon Dung is 1 mile wide and passes S of Grand Banc and Hon Mat.

Approaching from the S, a vessel should pass E of Iles des Pecheurs and proceed between Hon Mot and Hon Tam or between the latter islet and Hon Mieu. Care must be taken to avoid Rocher du Lion off the W side of Hon Mot.

**Caution.**—Submarine cables are laid across Baie de Nha Trang, generally in an E direction from the shore 2 miles NW of Mui Chut.

Caution is necessary at night due to the presence of fishing boats which often show no lights.

### Baie de Nha Trang to Vinh Cam Ranh

**5.29** Plage de Thuy-Trieu, a low, sandy beach, backed by sandhills, extends 9 miles SSE from a point located 2 miles SSW of **Mui Dong Ba** (12°09'N., 109°14'E.). A bare and rocky hill, 142m high, lies at the SE end of the beach.

Mui Lo Gio, 2 miles farther SW, is rocky and bare; a rocky ledge, with a depth of 4.6m at its extremity, extends 0.2 mile ENE from the point. A rock, 4m high, lies nearly 1 mile NNW of the point; a 4.2m shoal lies 0.1 mile NE of the rock.

The N entrance point of Baie de Ba Dai is located 1.5 miles SSW of Mui Lo Gio. Two islets lie on a bank extending 0.8 mile E of the N entrance point. Hon Nhan is the inner islet. The outer islet is 16m high, and Mui Cam Linh (Pointe de Cam Ranh) is located 3.5 miles farther S.

#### **Approach to Vinh Cam Ranh**

**5.30** The approach to Vinh Cam Ranh lies between **Mui Cam Linh** (Pointe de Cam Ranh) (11°53'N., 109°17'E.) and Mui Da Vaich, 9.5 miles SSW. Vinh Cam Ranh is one of the finest harbors on the coast of central Vietnam. A secure anchorage is available for all types of vessels at the approaches and within the bay.

Mui Cam Linh (Pointe de Cam Ranh) is the E extremity of the mountainous end of a peninsula. The summit of this peninsula is Nui Ao Ho (Ao Ho), 465m high, located 2.3 miles WNW of Mui Cam Linh. Hon Deo, 14m high, is the outermost islet lying off a point located 1.2 miles SSW of Mui Cam Linh.

**Dao Tagne** (11°50'N., 109°15'E.) lies with Mui Bai Nom, its S extremity, lying 4 miles SW of Mui Cam Linh. The island is divided into two parts by low land with palms on it. The summit, 206m high, with a conspicuous white square building on it, is located on the SW side of the island. Hon Co Ngoai (Hon Kho Ngoai), 15m high, lies 0.3 mile off the SE extremity of the island.

**5.31** Mui Da Vaich (Mui Da Vach) rises steeply to an elevation of 330m about 0.7 mile W of the point and forms the E extremity of a range of mountains, which attains an elevation of 950m in Nui Ong, 4.8 miles WNW of Mui Da Vaich. On Nui Ong there is an isolated rock, or knob, resembling that on Cap Varella. Nui Chua, cone-shaped, is located 1 mile E of Nui

Ong. Mui Da Vaich slopes evenly from its summit and is wooded to the steep cliffs fronting the sea. Rocher Varella, 5m high, is conspicuous close S of the point. There is deep water close off the point.

Hon Chut, 117m high, bare and rocky, lies 2.7 miles NNW of Mui Da Vaich and is connected to the mainland by a submerged ridge with depths of 3.7m in the fairway. An islet and above-water rocks lie close SSE of Hon Chut. A light is shown from the NE end of Hon Chut.

Hon Salacco (Hon Trung), 25m high, lies 0.3 mile NW of Hon Chut. Basse Salacco, with a depth of 5.2m, lies 0.3 mile NE of Hon Salacco.

Mui Ca Tien (Pointe de Ba Tien), lying 1.7 miles NW of Hon Chut, is the E extremity of a peninsula joined to the mainland by a narrow neck of land.

**Hon Trung** (Hon Mui) (11°49'N., 109°12'E.), 22m high, is composed of dark rock with its summit covered with brushwood, and lies 0.5 mile NE of Mui Ca Tien.

Grande Passe, the access channel to Vinh Cam Ranh, is entered between Hon Trung and Dao Tagne, 1.5 miles NE. The passage has depths of 20 to 25m in the fairway.

Mui Sopt (Mui Sop), 3.5 miles N of Hon Trung, is the N extremity of a range of hills that separates the outer roadstead from Vinh Cam Ranh. Rocher Doigt, a hill, 140m high, is conspicuous nearly 0.5 mile S of Mui Sopt.

Hon Lo Ong Gia, a group of rocks, one of which is 8m high, lies 1 mile S of Mui Sopt. There are other dangers near.

Le Goulet, the passage leading into Vinh Cam Ranh, lies between Mui Sopt and Mui Hon Lan (Mui Hon Luong), 0.8 mile ENE. Mui Hon Lan is fairly steep-to, while Mui Sopt is foul to a distance of 0.1 mile, and Le Goulet has depths in the fairway of 22m. A radio tower, marked by red obstruction lights, stands 1.2 miles NNE of Mui Hon Lan.

Baie de Binh Ba, on the E side of the outer roadstead, is entered between Mui Nam, the NW extremity of Dao Tagne, and Mui Hon Lan. Baie de Binh Ba has general depths of about 14 to 22m.

#### Vinh Cam Ranh (11°53'N., 109°10'E.)

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**5.32** Vinh Cam Ranh, on the coast of central Vietnam, is easy to access and surrounded by mountains. The harbor opens N and SW within Le Goulet. The village of Cam Lam (Cam Ranh) lies on the W side of the bay, 3.5 miles WNW of Mui Hon Lan.

Pointe Bai Sau lies on the E side of the bay, 1.8 miles N of Mui Hon Lan. A sandbank, with depths of less than 1m and steep-to on its W side, extends 0.8 mile W of the point.

Mui Con Ke projects from the NW shore of the bay, 2 miles NNW of Pointe Bai Sau. Lagune de Thuy-Trieu, a shallow lagoon, extends N of Mui Con Ke and is separated from the sea by Plage de Thuy-Trieu, a narrow neck of land.

**Tides—Currents.—**The tidal rise at Vinh Cam Ranh is 1.7m at MHHW. In Vinh Cam Ranh, at springs, the current inside the bay and at the entrance is less than 1 knot.

**Depths—Limitations.**—There are depths of 9.2 to 18.3m for a distance of 2 miles within the entrance. In the SW part of the bay, depths of less than 5.5m extend 1.5 miles from the

shore. The NW shore, opposite Le Goulet, is bordered by drying reef extending up to 0.5 mile offshore in places.

Rocher Da Nau, with a depth of 1.5m, lies 1 mile E of Cam Lam. Banc de Da Bac, nearly awash and marked by a tower, lies 1 mile S of Cam Lam.

A concrete tanker pier, 160m in length, with a depth of 12.8m alongside, lies 0.5 mile S of Pointe Bai Sau. The pier is connected to the shore by a causeway, and a mooring dolphin is situated close seaward of the pier. A pier close S can accommodate deep-draft vessels.

A channel dredged to 9.2m and marked by lights leads to charted LST ramps and a basin situated 1 mile N of Pointe Bai Sau.

The T-head pier, at the outer end of the causeway S of Cam Lam, has a 90m long face capable of berthing vessels up to 107m in length and a draft of 4.9m.

**Pilotage.**—Pilotage is compulsory and should be arranged well in advance. The pilot will board in 11°48'30"N, 109°12'30"E during daylight hours.

**Signals.**—The Harbor Entrance Control Post (HECP), situated on top of a conspicuous white building on Mui Hon Lan, may be contacted by radio or flashing light. Anchorage berths are assigned by the post.

Storm signals are shown from Cam Lam, 0.9 mile NNE of the head of the pier.

**Anchorage.**—Vessels can anchor according to draft in Vinh Cam Ranh or the approaches as directed by HECP.

## Vin Cam Ranh to Baie de Phan Rang

**5.33 Ilot Da Tai** (Hon Long Doi) (11°43'N., 109°14'E.), 46m high, lies close offshore, 1 mile SW of Mui Da Vaich.

Baie de Vung Gang, entered 1 mile farther W, is difficult to distinguish due to the high mountains near it. La Sentinelle, a small island, lies close off the W shore of the bay, 0.5 mile N of the S entrance point of the bay. A rock, above water, lies close E of the latter entrance point. Three rocks above water lie close N of La Sentinelle. The bay is divided into two basins N of the latter rocks. A fishing village stands at the head of the bay, and a number of fishing craft are found here in season.

Anchorage can be taken in a depth of 14.6m in the outer basin, which provides good protection and is easy to access. Heavy squalls occur at times, but the holding ground is good.

The coast between the S entrance point of Baie de Vung Gang and Hon Chong, 8.5 miles SSW, slopes steeply inland from the mountains and is fringed by reef. Bai Lua, 27m high, lies midway along this stretch and close offshore.

Hon Chong, 27m high, is the outer of a group of islets extending 0.5 mile off the coast. Hon Do, a low peninsula, lies 1.3 miles SW.

**5.34 Vung Phan Rang** (Thon Ninh Chu) (Baie de Phan Rang) (11°35'N., 109°02'E.) (World Port Index No. 57600) is entered between Hon Do and the mouth of Song Kinh Dinh, 6 miles WSW. The river is not navigable. Two mountains are located at the head of the bay; Nui Quit, 356m high, rises 5 miles WNW of Hon Do, and Nui Ca Du, 319m high, rises 3.2 miles farther WNW.

**Depths—Limitations.**—Plateau de Corail, with a least depth of 0.3m, extends 0.7 mile to 1.5 miles SW of Hon Do.

Banc du Chateaurenault, with a least depth of 2.4m, lies 3.2 miles WSW of Hon Do; a 5.5m patch lies 1 mile NE of the bank. Banc du Haiphong, with a depth of 0.3m, lies 3.2 miles WNW of Hon Do and 0.5 mile offshore.

There are depths of 7.5 to 14.6m in the entrance to the bay, W of Banc du Chateaurenault. The general depths in the bay are 7.5 to 9.2m.

**Aspect.**—A prominent church of Phan Rang stands 2 miles WNW of the mouth of Song Kinh Dinh. A drying coral reef extends 0.8 mile E from a point lying 0.7 mile N of the above river mouth. The town of Ninh Chu lies 2.5 miles farther N.

**Anchorage.**—During the Northeast Monsoon, the best anchorage is in a depth of 7m in the NE part of the bay.

## **Vung Phan Rang to Mui Vung Tau**

**5.35** The coast from Song Kinh Dinh to **Mui Dinh** (11°22'N., 109°01'E.), 10.5 miles S, is backed by high land. Nui Cha Bang, 437m high, is located 8 miles NW of Mui Dinh at the N end of a range of mountains extending S. Nui Maviek, 354m high, is located 3.5 miles E of Nui Cha Bang and 1.2 miles from the coast.

Mui Dinh (Cap Padaran) is high, steep, and convex to seaward. Nui De Ca, 614m high, is located 4 miles W of the cape. The land near Mui Dinh appears isolated when viewed from the N or SW.

**Aspect.**—A light is shown from the high part of the cape. Vessels can communicate with the signal station on Mui Dinh by means of the International Code of Signals.

Banc Nouvelle, with a depth of 6.1m, lies 2 miles N of Mui Dinh and 1 mile offshore.

**Anchorage.**—During the Southwest Monsoon, large vessels can anchor in a depth of 14.6m off a small bay close N of Mui Dinh, with the NE extremity of the cape bearing 157°. Bancs du Lutin, with depths of 1.4 to 3.3m, lie close NNW of the anchorage.

**5.36** High land extends along the coast from Mui Dinh to Mui Sung Trau, 7 miles WSW.

Baie de Padaran is entered between Mui Sung Trau and Pointe Lagan, 15 miles SW. The SW part of the bay is encumbered by a bank with depths of less than 9m. Hon Lao, 40m high, lies 8 miles ENE of Pointe Lagan, on the E edge of the above bank. A bank, with a depth of 4.3m at its outer end, extends 1 mile W of the island.

Banc Ernest Simons, with a depth of 8.8m, lies 2 miles E of Hon Lao.

Banc de Breda, with a least depth of 1.5m, coral, lies nearly midway between Hon Lao and Mui Sung Trau.

Ca Na, a village situated 2.5 miles NW of Mui Sung Trau, lies on the E side of the entrance to a lake. The village lies at the S end of a gap between the mountains which is only prominent from SW. A power station, 1.5 miles ESE of the village, can be recognized by a white building and a water tower.

Anchorage can be taken during the Northeast Monsoon, in depths of 9 to 13m, sand, SW of the power station and 0.8 mile offshore. A SE swell is developed in the bay during the Northeast Monsoon.

**Pointe Lagan** (11°10'N., 108°43'E.) is the extremity of a narrow spit of land. A ledge, with depths of less than 5.5m, extends 2.5 miles SW of the point.

**5.37 Off-lying dangers.**—The coastal bank, with depths of less than 20m, sand and coral, extends 13 miles SSE from Pointe Lagan. Banc de l'Althea, with a depth of 12.8m, lies 12 miles SSE of Pointe Lagan and is the outermost of several dangerous shoal heads.

Banc Bourayne, with a depth of 8.8m, lies 2.5 miles NNW of Banc de l'Althea. Banc Duchaffaut, with a depth of 8.8m, lies 3 miles farther NW.

The banks off Pointe Lagan are rocky, and there are bamboo fish traps on or near them, sometimes in considerable depths. There are also numerous wrecks in the area. Vessels should give Pointe Lagan a berth of about 15 miles.

Banc de Torcy, with a least depth of 14m, lies 17 miles S of Pointe Lagan.

Vung Phan Ri is entered between Pointe Lagan and Pointe Guio, located 15.5 miles WSW. Hai Tan, a large village, lies 9 miles NNE of Pointe Guio at the mouth of Song Luy. The coast between Pointe Guio and Hai Tan consists of cliffs of reddish color, E of which the slopes of the hills are wooded.

Anchorage can be taken in depths of 7 to 9m, SW of the mouth of Song Luy, with Pointe Lagan bearing 075°. During the Northeast Monsoon, small vessels can find shelter, in a depth of 6.4m, NW of Pointe Lagan.

Nui Binh Nhon, a 236m high sand hill standing 4 miles W of Pointe Guio, can easily be recognized.

**Mui** Ne (Pointe Vinay) (10°55'N., 108°18'E.) is the extremity of a low, wooded hill, steep on its S side at the S end of a peninsula. Hon Lao, 25m high and covered with grass, lies 0.5 mile SE of the point. A tower is conspicuous on the W side of the peninsula, 1 mile N of the point.

**Caution.**—Banc Rivier, with a depth of 12.8m, coral, and Banc Madge, with a least depth of 12.8m, coral, lie about 18 miles SE and 15 miles S, respectively, of Mui Ne. (Banc Hollandais and other off-lying dangers have been previously described in paragraph 5.2).

**5.38** Vinh (Vung) Phan Thiet occupies the bight between Mui Ne and Mui Ke Ga, 22 miles SW. Depths in the bay are irregular, and a bank with depths of less than 5.5m, extends 1.5 miles W of Mui Ne. Fishing nets may be found at a distance of 10 miles offshore abreast Ving Phan Thiet and Mui Ne.

**Mui Ke Ga** (10°42'N., 108°00'E.) is the extremity of a low tongue of land and the prolongation of a spur of Nui Ta Kou. The latter mountain, 694m high, rising 9 miles NW of Mui Ke Ga, is the most conspicuous of the mountains W of Vung Phan Thiet, and stands detached from any other high land. Ilot Ke Ga lies close S of the point. A light is shown from the islet.

**Caution.**—A mined area lies 1.5 miles S of Ilot Ke Ga; the area is charted and extends approximately 10 miles N to S and 7 miles E to W. Another mined area lies 10 miles SW.

The town of Phan Thiet, an important fishing center, lies 15 miles NNE of Mui Ke Ga, at the mouth of Song Cai. The light structure, on the E side of the river entrance, is not very visible among the trees. The best landmarks are a water tower, with a

red roof, and a tower marked by red obstruction lights, 1 mile NNW and 2.2 miles W, respectively, of the light structure.

Anchorage can be taken, in a depth of 7.9m, mud, with the light structure at Phan Thiet bearing 314°, distant 2 miles.

During the Northeast Monsoon, anchorage can be taken, in a depth of 6.4m, in the NE part of the bay, off Hai Long (Khan Thien), keeping clear of the bank extending W of Mui Ne.

**5.39** The coast between Mui Ke Ga and Mui Ba Kiem, 31 miles WSW, is low, and the coastal bank, with depths of less 11m, extends up to 6 miles offshore in places. A bank, with depths of 4 to 5.5m, extends 2.5 miles WSW from a position lying 2 miles WSW of Mui Ke Ga.

Hon Ba, a 38m high islet, is wooded and lies 11.5 miles WSW of Mui Ke Ga and 1.3 miles offshore.

A spit, with a depth of 4m at its S extremity, extends 4.2 miles offshore from a position lying 3 miles WSW of Hon Ba.

Caution.—Banc de Britto, with a least depth of 0.9m, lies near the outer edge of the 20m curve, 16 miles SW of Mui Ke Ga. Vessels are advised not to pass between Banc de Britto and the coast without local knowledge and, in adverse weather, should not approach the bank in depths less than 29m. (Bancs de l'Astrolabe, farther S, and the shoals in the vicinity were previously described in paragraph 5.4.)

**Mui Ba Kiem** (10°30'N., 107°31'E.) is 119m high. Nui Ho Linh, 162m high, lies 0.8 mile NW of the cape. A chain of yellowish-white sand hills, 36 to 46m high, extends along the coast between Mui Ba Kiem and Mui Ho Tram, located 4.5 miles WSW; the hills lie a short distance inland, 1 to 3 miles NE of Mui Ho Tram.

**Caution.**—Rocher Rosslyn, with a depth of 0.6m, lies 6.2 miles SSE of Mui Ba Kiem.

Haut Fonds de Ba Ke, a number of isolated patches, with depths of 4 to 9.2m, extend 7 miles SSE of Mui Ho Tram. These shoals are separated from each other by depths of 11 to 12m, causing overfalls. Detached shoals, with depths of 10.1m and 7.3m, lie 8 and 11 miles S, respectively, of Mui Ho Tram.

During restricted visibility vessels should pass the above dangers in depths of 22m or more.

**Mui Ky Van** (10°23'N., 107°16'E.), 12 miles WSW of Mui Ho Tram, rises to several peaks, the highest of which is Nui Chau Vien, 327m high, located 2 miles N of the cape. A conspicuous red building stands near the shore, 2 miles NE of Mui Ky Van.

Rocher Pernambuco, with a depth of 5.2m, lies 2 miles SE of Mui Ky Van. The depths in the vicinity are irregular, with several shoal patches nearby; the shallowest and outermost, with a depth of 5.2m, lies 3.2 miles SSE of Mui Ky Van.

Between Mui Ky Van and Mui Vung Tau, 11 miles WSW, there is a shallow bay, the shores of which are low and backed by sand hills.

## Song Sai Gon

**5.40** The delta of Song Sai Gon lies in a bay entered between **Mui Vung Tau** (10°19'N., 107°05'E.) and Pointe du Mirador, the NE entrance point of Cua Tieu, 20 miles WSW. The delta is composed of numerous islands, separated by rivers

or canals which are connected with each other. The delta provides access to the important port of Sai Gon (Than Pho Ho Chi Minh), situated 35 miles NW of Mui Vung Tau.

Song Sai Gon has its source 80 miles NW of Mui Vung Tau and pursues a winding course as far as Sai Gon. About 4 miles SE of Sai Gon, the river is joined by Song Dong Nai. At Pointe Phami, 5 miles below this junction, the river divides into two branches. The E branch, consisting of Song Long Tao and Song Nha Be, flows through the middle of the delta and enters Vung Ganh Rai, 9 miles NW of Mui Vung Tau. This branch is the principal access to Sai Gon, being the deepest and best marked, and ascends for a distance of 46 miles from Mui Vung Tau to Sai Gon. The W branch, consisting of Song Nha Be and Cua Soirap, is entered 12 miles WNW of Mui Vung Tau. Banc du Soirap, with a least depth of 1.2m, extends 12 miles SE from the E entrance point of Cua Soirap.

# **Mui Vung Tau and Approaches**

**5.41** Mui Vung Tau is the S extremity of an island which has three steep hills on its W side. These hills are the first high land seen when approaching from SW and appear as islands at a distance. Nui Nho, 182m high, the S of the three hills, lies nearly 1 mile NNW of Mui Vung Tau. The highest hill, 245m high, lies 1.5 miles farther NNW. Nui Dinh, 491m high, the S peak of a group of mountains, lies 13.5 miles NNE of Mui Vung Tau. Mui Ky Van, 11 miles ESE of Mui Vung Tau, was previously described in paragraph 5.39.

A light is shown from the summit of Mui Vung Tau and a racon transmits from the tower; a signal station is situated near the light.

The climate at Mui Vung Tau is tropical and there is heavy rainfall from May to October.

# **Dangers in the Approach**

**5.42** In adverse weather the banks in the S approach to Mui Vung Tau should be cleared with close regard to the soundings. Approaching from NE, **Britto Bank** (10°29'N., 107°50'E.) and other dangers off the coast should be given a wide berth. A dangerous wreck lies on the E side of the bank. Additionally, there are dangerous wrecks lying 4 miles NE and 10 miles E of Britto Bank.

Banc du Cap has a least depth of 7.6m and lies 2.2 miles SE of Mui Vung Tau. A detached shoal, with a depth of 7m, lies 3 miles SE of Mui Vung Tau.

Banc du Requin, farther E, has least depths of 6.4 and 5.8m lying 5.5 and 6 miles ESE, respectively, of Mui Vung Tau.

Banc Formosa, 1 mile ESE of Mui Vung Tau, has a least depth of 4.4m in its W part, and a rock, with a depth of 1.5m, lies 2 miles ESE of the cape.

Banc Ranza, with a least depth of 5.8m and extending in a WNW-ESE direction, is centered 0.7 mile W of Mui Vung Tau. A considerable number of wrecks and obstructions, some of which are marked by buoys, lie near the bank and in the access to the E branch of the river.

Ilot Archinard, 15m high, lies 0.4 mile NE of Mui Vung Tau, on the outer edge of a reef extending 0.2 mile offshore and another islet lies 0.2 mile SW of Ilot Archinard. There is a rock, with a depth of 6.4m, lying 0.3 mile SE of Mui Vung Tau.

On the W side of the approach, Bancs de Can Gio, which dry 0.3 to 2.4m, extend nearly 2 miles offshore between **Mui Dong Tranh** (10°20'N., 106°53'E.), located 10 miles NE of Pointe du Mirador, and Mui Ganh Rai (Pointe Can Gio), lying 6.5 miles farther ENE.

Banc du Sud-Ouest, with depths of less than 9.1m, extends farther SE, between Banc du Soirap and a position lying 1.5 miles SW of Mui Vung Tau.

Banc du Phare, with depths of 0.8 to 1.9m on its E edge, lies on the W side of the access to Vung Ganh Rai. The bank is separated from Mui Do Cao Trang, located 2.5 miles NNW of Mui Vung Tau, by a deep channel 1.2 miles wide.

**Tides—Currents.—**The tidal rise at Mui Vung Tau is 3.5m at MHHW and 3.3m at MLHW.

At Mui Vung Tau the flood current begins shortly after LW and the ebb shortly after HW.

At Sai Gon the flood current begins about 4 hours 45 minutes after LW at Mui Vung Tau; the ebb current begins 4 hours 15 minutes after HW at Mui Vung Tau. The duration of slack water is about 20 minutes. The flood current attains its maximum velocity quickly, the ebb current slowly.

The current attains velocities of 1 knot to 3.5 knots. The local pilots anticipate a velocity of 1 knot for every meter of tidal range. According to the pilots, if the range of tide is less than 0.9m, there is no flood current for that flood tide.

The duration and velocities of the tidal currents are greatly influenced by the rainy season (August through September) and the flood current is often completely negated, so that the ebb flows continuously.

**5.43** Off **Pointe du Lombard** (10°36'N., 106°52'E.) violent crosscurrents and undertows are experienced.

During the Northeast Monsoon, a vessel may be set leeward of Mui Vung Tau toward Bancs de Can Gio by the prevailing current, accelerated by the flood tidal current. During the ebb, however, the current is at times overcome and there may be a NE set. During the flood tide the current sets W over Banc Formosa. Westward of the bank it sets more N into Vung Ganh Rai. On the ebb tide it sets in a S direction out of the bay and E over Banc Formosa. Slack water occurs about 1 hour after high and low waters at Mui Vung Tau, and the currents attain velocities of about 2 knots; this velocity is maintained for the middle 2 hours of the rising and falling tides.

**Pilotage.**—Pilotage is compulsory. The pilot station is situated at Baie des Cocotiers (Vung Dua). Request for a pilot should be made by radio or VHF at least 24 hours in advance, stating the draft and any possibly dangerous material. The pilot boards 2.5 miles NW of Mui Vung Tau. The customs official usually boards with the pilot.

**Anchorage.**—Anchorage can be taken in depths of 10 to 20m off the high land NNW of Mui Vung Tau, on either side of the entrance channel. The anchorage is excellent during the Northeast Monsoon, but there is often considerable swell during the Southwest Monsoon.

Vessels in quarantine anchor at Nha Be.

Anchorage is prohibited, except in case of emergency, within 1 mile of either side of the sharp bends of the river, or in the vicinity of the channel through Banc du Corail.

It has been reported (1989) that vessels anchoring S of 10°19'N will be asked to proceed closer to Xa Vung Tau in order to be boarded and cleared by the authorities.

#### **Main Channel**

**5.44** The entrance to the E and main branch to Sai Gon lies between **Mui Ganh Rai** (10°25'N., 106°59'E.) and the S extremity of Cu Lao Phu Loi, 2 miles NNW. The bar leading into Song Nga Bay lies NE of Mui Ganh Rai and has depths of 7.2m on the recommended track to abreast Mui Ganh Rai. The entrance channel is buoyed. It has been reported that buoys may not be in their charted positions and they may no longer exhibit lights.

There are least depths of 6.4m on either side of the recommended track, with the exception of a 5.5m shoal, about 1 mile NNE of Mui Ganh Rai, close S of the recommended track.

The channel narrows toward the NW part at the river entrance. Within the bar the depths increase and then there are generally ample depths upriver. The shallowest depths are found on the point side of the bends in most cases. There is adequate room in most reaches of the river for vessels to pass each other.

A bank, with depths of 4.2 and 5.5m at its E edge, extends halfway across the river, abreast **Rach Don** (10°34'N., 106°50'E.), on the W side of the river.

**Banc du Propontis** (10°35'N., 106°52'E.), with a depth of 5.2m at its W edge, extends halfway across the river from the E bank. About 0.5 mile farther N, a bank with depths of 4.5m at its E edge, extends halfway across the river opposite Rach Tac Roi

Banc de Corail, which extends across the river, lies with its S end lying 0.5 mile NNW of **Pointe du Lombard** (10°36′N., 106°52′E.), and its N end in the concave side of the bend, 1 mile farther NNW. The least charted depth in the channel through the bank is 5.4m near its S end, although it was reported (1995) that lesser depths may exist, particularly in this vicinity. Shoal depths are reportedly encroaching toward the center of the channel from both sides of the river (1995).

Song Long Tao enters Song Nha Be N of **Pointe Phami** (10°40'N., 106°47'E.). A spit, with a depth of 4.9m at its extremity, extends 0.2 mile NW of the point. Anchorage is prohibited in the area NW of Pointe Phami.

**5.45** Nha Be (10°41'N., 106°47'E.) is a subport of Sai Gon and the commercial oil depot for Than Pho Ho Chi Minh, lying on the W bank of Song Nha Be, 4 miles NW of the city.

**Tides—Currents.—**Vessels proceeding to Nha Be normally cross Banc du Corail at HW, turn opposite the jetty on the flood tide and berth starboard side-to. Vessels crossing Banc du Corail later than 1 hour after HW have to berth on the ebb tide. Vessels berthing on a flood tide must also unberth on a flood tide. Vessels which berth on an ebb tide may only unberth on either the first or last hour of the ebb tide.

**Depths—Limitations.**—There are jetties equipped with mooring buoys with depths alongside of 8.2, 9.2, and 9.4m, respectively. There are two wharves with a combined berthing

length of 380m and alongside depths of 10 to 13m. Vessels of up to 30,000 dwt can be accommodated.

There are several mooring buoys inside the 10m curve between Pointe du Lazaret and Nha Be.

Banc de la Ville de Paris and a bank close SE, each with depths of less than 5.5m, extend 0.4 and 0.3 mile, respectively, off the E bank of Song Nha Be, opposite the port of Nha Be.

From N of Banc de la Ville de Paris to **Mui Den Do** (Pointe du Feu Rouge) (10°44'N., 106°46'E.), a bank with depths of less than 5.5m, extends off the E bank of Song Nha Be, as far as the middle of the river. A dangerous wreck, marked by buoys close NE and SW of it, lies 0.9 mile SW of Mui Den Do.

Mui Ky Ha (Pointe de Binh Loi), 0.4 mile NNE of Mui Den Do, is the N entrance point of Song Dong Nai. Banc de Caobang, with depths of less than 5.5m, extends 0.7 mile SSE of Mui Ky Ha. Xom Cat Lai lies 2.5 miles ENE of the point.

Song Sai Gon, entered N of Mui Den Do, extends W and winds irregularly for about 5 miles to the mouth of Kinh Te, the S limit of the port of Sai Gon .

Pointe du Rach Bao lies on the N side of the river, 0.8 mile W of Mui Den Do. Banc du Chargeur, with a depth of 4.9m at its outer edge, extends 150m W of Pointe du Rach Bao. Banc du Gange, with a depth of 4.9m at its E edge, extends nearby to mid-river from the W bank, just N of Banc du Chargeur.

Above these dangers the channel is clear except for the fringing banks and several stranded wrecks on the N bank of the river.

**Caution**—An overhead cable, with an estimated vertical clearance of 40m, spans the river about 0.3 mile E of the mouth of Kinh Te.

**West Channel.**—Cua Soirap is an alternate channel and can be used at any stage of the tide by vessels with a maximum draft of 6.7m. The channel entrance, common to Cua Soirap and Cua Tieu, is buoyed.

The bar obstructing the channel to Cua Soirap is covered with fishing stakes. The fairway over the bar is marked by buoys which are moved as necessary and requires local knowledge.

Abreast the entrance of Song Vam Co (10°29'N., 106°44'E.) there is a shelf, with depths of 4.6m, encumbered by rocks and fishing stakes.

# Sai Gon (Than Pho Ho Chi Min) (Saigon) (10°46′N., 106°43′E.)

#### World Port Index No. 57580

**5.46** The port of Sai Gon (Saigon) lies on the W bank of Song Sai Gon and is the port for Thanh Pho Ho Chi Minh. The port extends from the mouth of Kinh Te, the S limit of the port, to the mouth of Rach Ben Nghe, 1 mile NW, then to the mouth of Rach Cau Bong, 1 mile farther NNE.

The Port de Commerce, the commercial part, lies in the S part of the harbor, and the navy yard occupies the N part. The N limit of the Port de Commerce is abreast the Statue of General Tra Hung Dau, standing 0.4 mile N of the mouth of Rach Ben Nghe.

The harbor offices and custom house are situated on the N side of the entrance to Rach Ben Nghe.

The Port of Nha Be, the oil port of Sai Gon, is situated about 10 miles below the port, and was previously described in paragraph 5.45.

The military port of Newport lies close E of the navy yard

#### **Tides—Currents**

The tidal rise at Sai Gon is 3.7m at MHHW and 3.2m at MLHW.

The tidal currents at Sai Gon can attain velocities of 4 knots. Off the E bank, the current turns 20 minutes before it occurs in mid-river. See also tides and tidal currents at Mui Vung Tau.

## **Depths—Limitations**

Vessels of up to 220m in length and 11m draft can transit the main channel between 0400 and 1600. Vessels must arrive in Sai Gon at least 1 hour before the end of the flood in order to swing at anchor before mooring.

The maximum draft of a vessel transiting the main channel to Sai Gon is limited to the depth in the channel through Banc du Corail. Vessels with less than 6m draft can cross the bank at any hour of the tide. In order to arrive at Than Pho Ho Chi Minh at the beginning of the flood, a vessel must be at Mui Vung Tau at the beginning of the flood there.

The least depth in Port de Commerce is 8.2m, on Banc du Canton, nearly in mid-river, off the mouth of Rach Ben Nghe. With this exception, the depths in the fairway are 9.8m or more.

Off the navy yard there are obstructions, with depths of 1.8 to 4.9m, about 0.4 mile SW of the mouth of Rach Cau Bong.

Quay Kanh-Hoi, 249m long, has 11 berths and is situated on the SW side of the river, close upriver of the mouth of Kinh Te, and has depths of 5.5 to 10.3m alongside. The quay at Nha Rong is 488m long and has depths of 6 tp 9m alongside. Tan Thuan is 343m long with alongside depths of 9.6 to 10.8m.

There are container and ro-ro facilities at the K-12 berths in depths of 12m. Ore and bulk cargo can be handled at quay K9 which is 100m long and has an alongside depth of 9.5m.

The Vitaico Terminal, which handles wood products, is 126m long, has an alongside depth of 8.7m, and can accommodate vessels of up to 16,000 dwt.

Ben Nghe is 519m long and has depths of 9.5 to 13m. There are five mooring buoys providing berths with lengths of 160 to 200m in depths of 7 to 10m.

The quay at New Port is 618m long and has alongside depths of 7.5 to 9.5m.

There is a passenger terminal with two quays. Quay MM1 is 138m long and has an alongside depth of 9m. Quay MM2 is 147m long and has a depth alongside of 6m.

There are 20 mooring berths in the harbor. Vessels are, as a rule, moored head and stern between buoys, with bows downstream. The buoys provide berths 50 to 200m long in depths of 7 to 13.3m.

Rach Ben Nghe, which connects Thanh Pho Ho Chi Minh with the river port of Cho Lon close SW, has a least depth of 0.9m and is crossed by three bridges.

Vessels can swing at anchor in only two areas; one is near the mouth of Rach Ben Nghe, and the other is N of Port de Guerre, above the navy yard. At the latter point, on the S bank, nearly 0.5 mile E of Rach Cau Bong, vessels place their bows on the bank between two beacons and let the tidal current swing them.

## **Pilotage**

Pilotage is compulsory. Pilots board at the pilot station on Cape St. Jacques during daylight hours only.

## Regulations

Vessels, as a general rule, are permitted to shift berth during daylight hours only, as prescribed by the port authorities. A 6 hour notice is necessary.

## **Signals**

There is a coast radio station and a port radio station at Thanh Pho Ho Chi Minh.

Storm signals are shown from a station situated 10°46'N, 106°42'E.

At Nha Be, a vessel should display its national flag and number. Vessels can display flag N of the International Code to obtain a motorboat which will take a message to be transmitted by telephone to Sai Gon. Vessels can also use the International Code.

# Anchorage

Anchorage is prohibited within the harbor limits. Vessels must anchor below the mooring berths and out of the fairway.

Vessels in quarantine or carrying explosives are instructed to anchor at Nha Be.

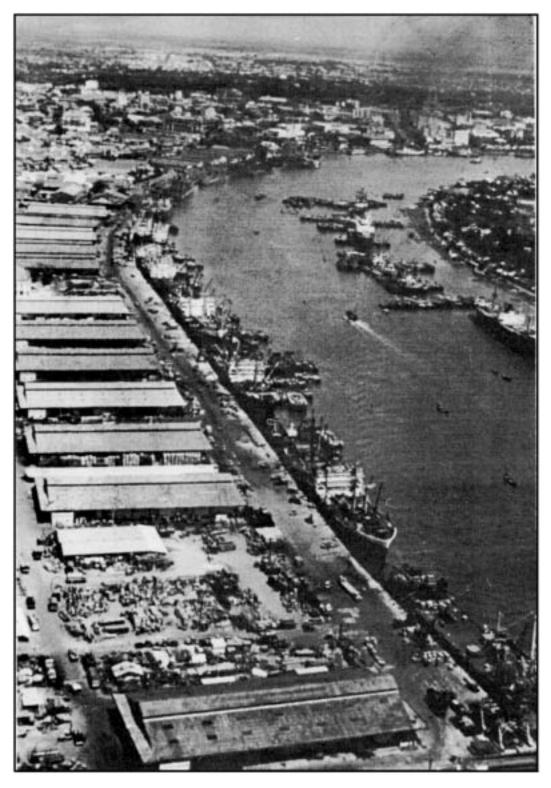
# The Mekong River

**5.47** The Mekong River, one of the world's great rivers, is 2,800 miles long and has its source in the mountains of Tibet. It flows through China, Burma, Laos, and Cambodia before reaching its delta in Vietnam. For the greater part of its length it runs through steep gorges and over dangerous rapids. At Kracheh, in central Cambodia, 105 miles above Phnom Penh, it becomes a wide, slow-flowing river, suitable for navigation by ocean-going vessels.

At **Phnom Penh** (11°36'N., 104°54'E.), the Mekong River divides into two principal arms, flowing nearly parallel to each other through Vietnam to the South China Sea. The E arm, and principal waterway used by ocean-going vessels, is known as Song Tien Giang, and the W arm is known as Song Hau Giang or Bassac.

At Phnom Penh, the Mekong River is joined by a river extending NW, which connects with Tonle Sap, a lake about 80 miles long.

Depths over the bars at its entrances are the controlling factor in the navigation of the Mekong River. There are depths of 2.1 to 3m over the bars of the principal mouths of the river. The river depths generally increase within the bars, but local knowledge is necessary.



Than Pho Ho Chi Minh (Sai Gon Harbor)

The land in the vicinity of the mouths is low and subject to frequent change due to the accumulation of alluvial deposits brought down by the different branches of the river.

**Tides—Currents.—**The water level in the river is low from February to June, the lowest levels occurring in April and May, and high from July to December, the highest levels occurring from August to October. When the river is low, the current is influenced by the tidal current as far as Phnom Penh; when the river is high, the effect of the tidal current is felt to about **Sadec** (10°18'N., 105°45'E.). At and above **Vinh Long** (10°15'N., 105°58'E.) the direction is continuously seaward.

Tidal currents in the river mouths attain velocities of 3 to 4 knots during the high river season on the ebb current. In the low river season it may attain velocities of 1.5 to 2 knots with large tides.

**Pilotage.**—Pilotage is compulsory in the Mekong River; it is compulsory from Mui Vung Tau to the Cambodian border. Pilots board and disembark in Baie des Cocotiers, NW of Mui Vung Tau.

Vessels bound for Phnom Penh, should signal, 48 hours in advance, their ETA at Mui Vung Tau to Mekong Pilotage Sai Gon, and their ETA at Phnom Penh to the Port Captain Phnom Penh through Sai Gon coast radio station.

Cambodia and Vietnam each maintain a pilot station in their respective territories near the border on the Mekong River. The Cambodian station is at **Kaam Samna Kraom** (10°56′N., 105°11′E.), and the Vietnamese station is at **Tan Chau** (10°48′N., 105°15′E.).

Vessels subject to pilotage are piloted by Cambodian pilots between the Vietnam border and Phnom Penh.

**Regulations.**—Vessels in the Vietnamese part of the Mekong River are only permitted to be underway from sunrise to sunset, except in unfavorable circumstances of the tide.

Vessels waiting overnight for the tide are only permitted to anchor at **My Tho** (10°21'N., 106°22'E.) or at certain points indicated by the pilot.

Vessels proceeding to Phnom Penh, and requiring the services of a pilot, must first obtain permission from the Cambodian authorities.

# **Song Tien Giang**

**5.48** Song Tien Giang, the E and principal waterway of the Mekong River, enters the sea through six main mouths. Cua Tieu, the N mouth and principal entrance, is entered between the NE extremity of Cu Lao Loi Quan and **Pointe du Mirador** (10°16′N., 106°45′E.).

Banks, with depths of less than 5.5m, extend up to 13 miles off the entrance of Cua Tieu; breakers generally mark the edges of the banks. Fish nets and large, isolated fish stakes, invisible at night, constitute a danger to navigation, especially near Pointe de Mirador.

Banc Norodom dries to a distance of 5 miles ESE of Pointe de Mirador. A light is shown from the S side of the bank, about 2.7 miles ESE of the point.

**Depths—Limitations.—**There are depths of 2.1m over the bar of Cua Tieu, which extends 11 miles from the entrance, and vessels without local knowledge should not cross it.

The allowable draft of a vessel proceeding to Phnom Penh depends on the depth of water on the bar at Cua Tieu plus the

tide at Mui Vung Tau. There are also bars at distances of 70, 78, and 120 miles above the entrance, but these, although possibly affecting the times of anchoring, do not necessarily diminish the practicability of the passage.

Vessels should arrive at the entrance of the bar at such time as to be able to cross with an underkeel clearance of 1.2m, and proceed up the river on the flood.

The allowable drafts vary from 4.4m in April to 5.5m in August through November.

Speed is limited to 10 knots in the entrance.

The seaward entrance to the channel, and the channel itself, are buoyed.

**Caution.**—There are many fishing stakes in Song Tien Giang, but these are generally well lit at night with the end stake normally being marked by a red light.

The passage is not as difficult as it may appear; the river is wide and there are few sharp turns. The bottom consists of soft mud and if a vessel goes aground serious damage is unlikely.

Vessels should be cautious of the high density of river craft, which in general, do not observe the regulations.

**5.49 Phnom Penh** (11°36'N., 104°54'E.), 178 miles above Cua Tieu, is the capital of Cambodia. The limiting draft for a vessel proceeding to Phnom Penh is dependent upon the draft of a vessel able to cross the bar at Cua Tieu.

The height of the river at Phnom Penh has a tidal range of of 9.2m from LW to HW. The current at Phnom Penh flows seaward, attaining a maximum velocity of 3.8 knots.

The port consists of a commercial harbor and a naval harbor. Pontoon Wharves Nos. 1 and 3, each 58m long, and Pontoon Wharf No. 2, in the commercial harbor, can accommodate vessels up to 2,000 tons. A wharf, 200m in length, two Theaded quays, and a wharf, 60m in length, have least depths of 5m alongside. Additional pontoons allow the berthing of vessels up to 100m in length.

Shell POL Pier, a T-head pier, with a berthing length of 76m, can accommodate vessels of 5,200 dwt, with drafts of 3.3 to 5m.

# **Song Hau Giang**

**5.50** Song Hau Giang (Bassac), the W arm of the Mekong River, is used mainly by vessels bound for Can Tho, Long Xuyen, and Chau Doc (Chau Phu). It has two mouths, Cua Dinh An and Cua Tran De, which are fronted by shallow banks extending 10 miles offshore.

Cua Dinh An, the entrance most used, is fronted by a bank which dries in parts. North of the bank there is another bank, which also dries in parts, and on which there is a stranded wreck.

The entrance channel to Cua Dinh An, which is buoyed, leads past Pointe de Long Kanh, the NE point of the river mouth. Caution should be exercised when approaching the entrance channel, due to the drying bank mentioned above, the lack of prominent landmarks, and the reported unreliability of the buoyage in the channel.

**Can Tho** (10°02'N., 105°47'E.) is situated 50 miles above the entrance to Cua Dinh An. The port handles gasoline, fertilizers, chemicals, cement, and rice.

**Depths—Limitations.**—There are two quays with a total berthing length of 142m in depths of 9m. Vessels of up to 18,800 dwt, 140m in length, with a draft of 7m can be accommodated.

**Pilotage.**—Pilotage is compulsory. The pilot boards at the Zero Buoy moored 9°29'N, 106°30'E. Pilotage must be requested by VHF 24 hours in advance of arrival through Vietnam Ocean Shipping Agency. The harbormaster will advise the vessel of an alternate boarding station in the event of poor weather conditions. Pilotage is available during daylight hours only.

**Anchorage.**—Vessels awaiting a pilot may anchor in the vicinity of the Zero Buoy in a depth of 12m.

# The Mekong River to Mui Bai Bung

**5.51** The coast of Vietnam, off the mouths of the Mekong River and then to **Mui Bai Bung** (8°37'N., 104°43'E.), is low, and at times inundated by the sea. In most parts the tops of the trees are only just visible at a distance of 11 or 12 miles. The coastal bank, with depths of 1.8 to 5.5m, borders this entire coast, extending up to 13 miles off the Mekong Delta. Off the delta, the depths seaward of the coastal bank increase abruptly to 11m, then to 18m.

Vessels bound for Mui Vung Tau from the W or SW are recommended to give Hon Khoai a wide berth, then pass E or W of the Con Son Islands (previously described in paragraph 5.5), and continue to navigate toward Mui Vung Tau, keeping well seaward of the coast. Many vessels have grounded on the banks off the Mekong delta due to the absence of landmarks and the rapid decrease in depths. If it becomes necessary to

approach this coast, a vessel should not proceed in depths of less than 20m, especially during the Northeast Monsoon, when there is a strong current which sets onto the banks.

The mouth of **Song Ganh Hao** (9°00'N., 105°25'E.) is obstructed by a bar which dries at very low tides. Mooring buoys have been established 6 miles SE of the river mouth. Junks ascend Song Ganh Hao as far as Quan Long (Ca Mau), 20 miles NW of the mouth, and can reach the Gulf of Thailand through inland waterways during the Southwest Monsoon.

Cua Bo De, 20 miles SE of the mouth of Song Ganh Hao, is the mouth of a small river that runs across the peninsula and connects with the Gulf of Thailand. Lighted and unlighted buoys, and a directional light lead into Cua Bo De.

**Hon Khoai** (8°26'N., 104°50'E.), 12 miles SE of Mui Bai Bung, the SW extremity of Vietnam, is 318m high at its S end and densely wooded. A light is shown from the E side of the summit

Hon Sao, 175m high and wooded, lies 1 mile E of the S end of Hon Khoai. Rocher Hull, 10 m high, lies 2.5 miles SE of Hon Sao; a rock, with a depth of less than 1.8m, lies close SW of Rocher Hull. In 1971, Rocher Hull was reported to lie 0.4 mile SSE of its charted position.

A bank, with depths of less than 5.5m and about 1 mile wide, extends E, then ENE, to a position lying 32 miles ENE of Hon Khoai.

**Caution.**—Banc du Royalist, with a depth of 11m, lies 26 miles SE of Hon Khoai. Another bank, with a depth of 11m, lies 20 miles ENE of Royalist Bank.

St. Marcouf, a bank with a depth of 6.7m, lies 32 miles E of Hon Khoai. A 14.6m shoal was reported (1966) to lie about 8 miles SW of St. Marcouf. A dangerous wreck was reported (1925) to lie 59 miles ESE of Banc du Royalist.